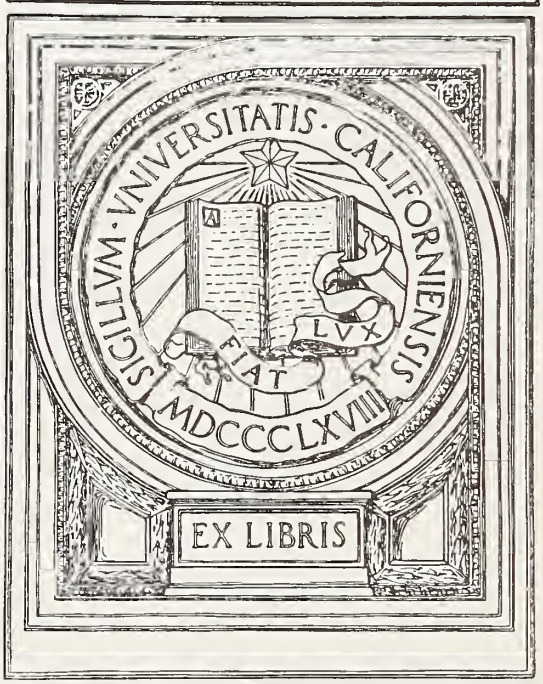
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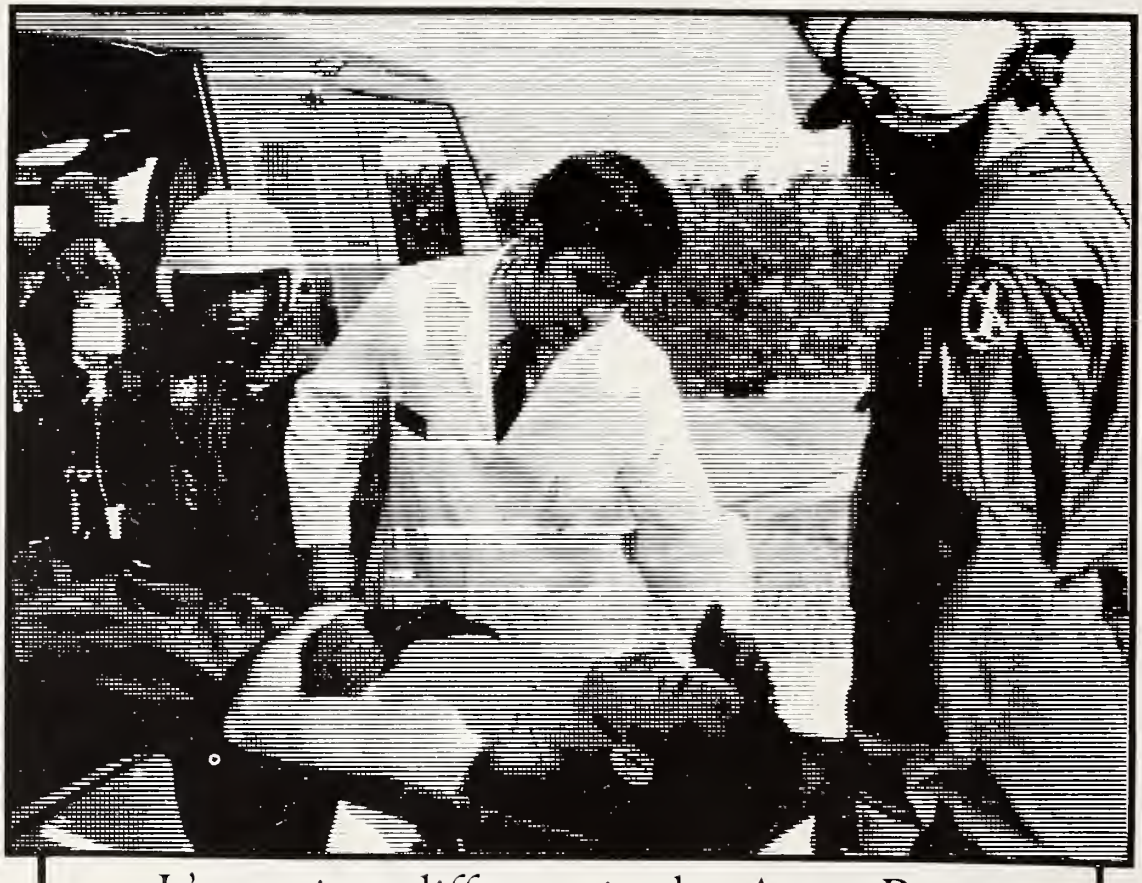
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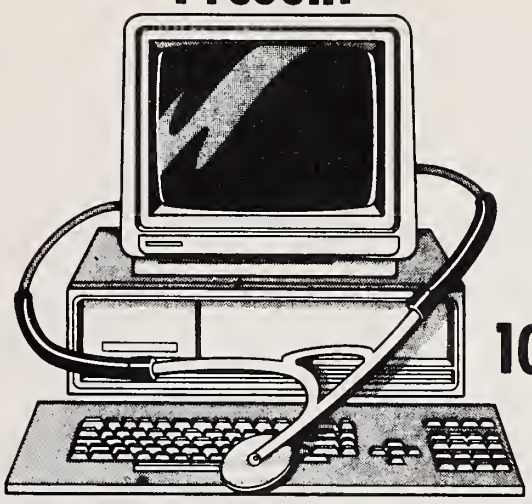


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THE COVER

Lamar Dodd's painting, "Heart Surgery," on this month's cover introduces two papers and one editorial in this issue of the *Journal* related to the field of surgery. Dr. Perdue's paper on p. 10 discusses the significance of changes in the traditional practice of surgery, and Dr. Van de Water's paper on p. 15 offers sketches of physicians from Georgia who have become leaders in surgery. The editorial, coincidentally written by one of those leaders, Dr. Hatcher, issues a call for surgical residency papers for publication in the *Journal*, based on merit.

The *Journal* would like to express appreciation and gratitude to Mr. Lamar Dodd for allowing us the privilege of featuring one of his paintings on the cover and to Dr. Robert Copeland, of LaGrange, for his help and cooperation in this regard.

Cover photo by Chuck Rogers, Atlanta.

Letter to the Editor . . .

The Challenge to Contain Costs

Dear Editor:

For the past 4 years I have been the medical director of Southeastern Health Services, Inc., the medical group that provides services to members of the PruCare Health Maintenance Organization (HMO). Prior to 1980, I had never seen an HMO. Thus, I have had to learn a great deal about health systems, cost containment, and management in a relatively short period of time. I would like to focus on three major changes that are currently underway in health care delivery.

The driving force behind the HMO industry, as well as PPOs and other health system changes, is the cost of health care. We are all aware that health care costs have increased from 5% of the Gross National Product (GNP) in 1950 to 11% in 1983. Certainly, our rate of increase as a percentage of the GNP is not as rapid as the computer industry. If the American auto industry reached 11% of the GNP, the nation would applaud its success. Yet we, as an American industry, are criticized and controlled for achieving this cost level. The reasons for the negative bias towards medicine's increased revenue are many and complex, varying from the belief that people should not attain

If the suggested tax reform measure to tax employee benefits becomes law, then employees as well as employers will actively demand cost controls.

significant wealth at the expense of other's illnesses to the concern that free market forces do not control the costs of medical care. Probably the most significant and compelling reason, however, is that over the past 40 years, we have developed a financing system that removes the purchaser of services from the responsibility for the cost of care that he or she obtains. In developing this system, the cost burden has fallen on government and industry. As the federal government attempts to decrease deficits and approach a controlled budget, the containment of Medicare and Medicaid costs, representing 40% of all federal expenditures, has become of utmost importance. These costs could be controlled by limiting the level of benefits provided or by reducing the cost of the benefits. Given the fact that public elected officials must be elected and re-elected in order to be in office, they will be responsive to their constituencies. If 400,000 physicians want benefits reduced and 30,000,000 Medicare recipients want benefits maintained, it seems reasonable to assume that the 30,000,000 member voting group will prevail. DRG legislation certainly supports this contention.

Health care benefits for our employed population are paid for, in large part, by their employers. Thus, increased cost of health benefits for employees results in reduced profits and/or increased costs of other goods and services. The past 5 years have seen an unparalleled involvement of industry in health care cost control coalitions and other efforts to control health care costs. As with government, the objective of employers is *not* to reduce benefits to their employees but to control or reduce the cost of these benefits. If the suggested tax reform measure to tax employee benefits becomes law, then employees as well as employers will actively demand cost controls.

Given this alliance between government and industry on the issue of health care cost containment, the pressure on the health care industry will only intensify.

Creative, proactive, realistic attempts to deal with problems (related to medical care delivery) must be developed.

The HMO industry has proven that hospitalizations, the most costly portion of health care costs, can be significantly reduced. A prepaid system can result in a hospitalization rate that is 50% of the rate of traditional indemnity systems and can do so with no negative affect on health status outcome or on any measurable parameter of the quality of care. If the average cost of a hospital day is $500 and an HMO can reduce the hospitalization rate from 800 days/1000 people to 400 days/1000 people, the hospital costs for 50,000 people can be reduced by $10,000,000 per year, or $200 per person per year. Granted, some of these savings are spent in increased outpatient costs, but these are less than 25% of the comparable in-patient costs. This means that prepaid systems can provide comprehensive (no-deductible) benefit packages for the same cost as traditional indemnity coverage. Needless to say, this cost feature is attractive to government, industry, and the general public.

Given this alliance between government and industry on the issue of health care cost containment, the pressure on the health care industry will only intensify.

In addition to the cost issue, a second factor is becoming increasingly significant in altering the structure of health care — the increased production of physicians in the U.S. As we all know, medical schools are graduating about twice as many M.D.'s as was the case in 1965. We already have twice the number of physicians to population in the Atlanta area as we did in 1965. If reductions were made next year in the number of freshman medical students, we would still have the predicted 90,000 M.D. national excess in 1990. The effects of this increasing number of doctors will have to be dealt with over the next few years. If no change occurs in our disease patterns, there will not be enough illness to go around. American medicine has never been faced with such a situation. Will some well trained M.D.s not be able to make a living practicing their chosen profession? Will we work 23 hour weeks?

A third intriguing aspect of change is the manner that the public selects its health provider. HMOs, be they group or IPA, direct the choice of people who choose their coverage. PPOs do the same. Medicare pre-payment systems will similarly direct large cohorts of people to select groups of physicians. As the number of M.D.s increases and as the number of people included in cohorts that identify select health care resources increases, it seems reasonable to anticipate a true crisis in the profession.

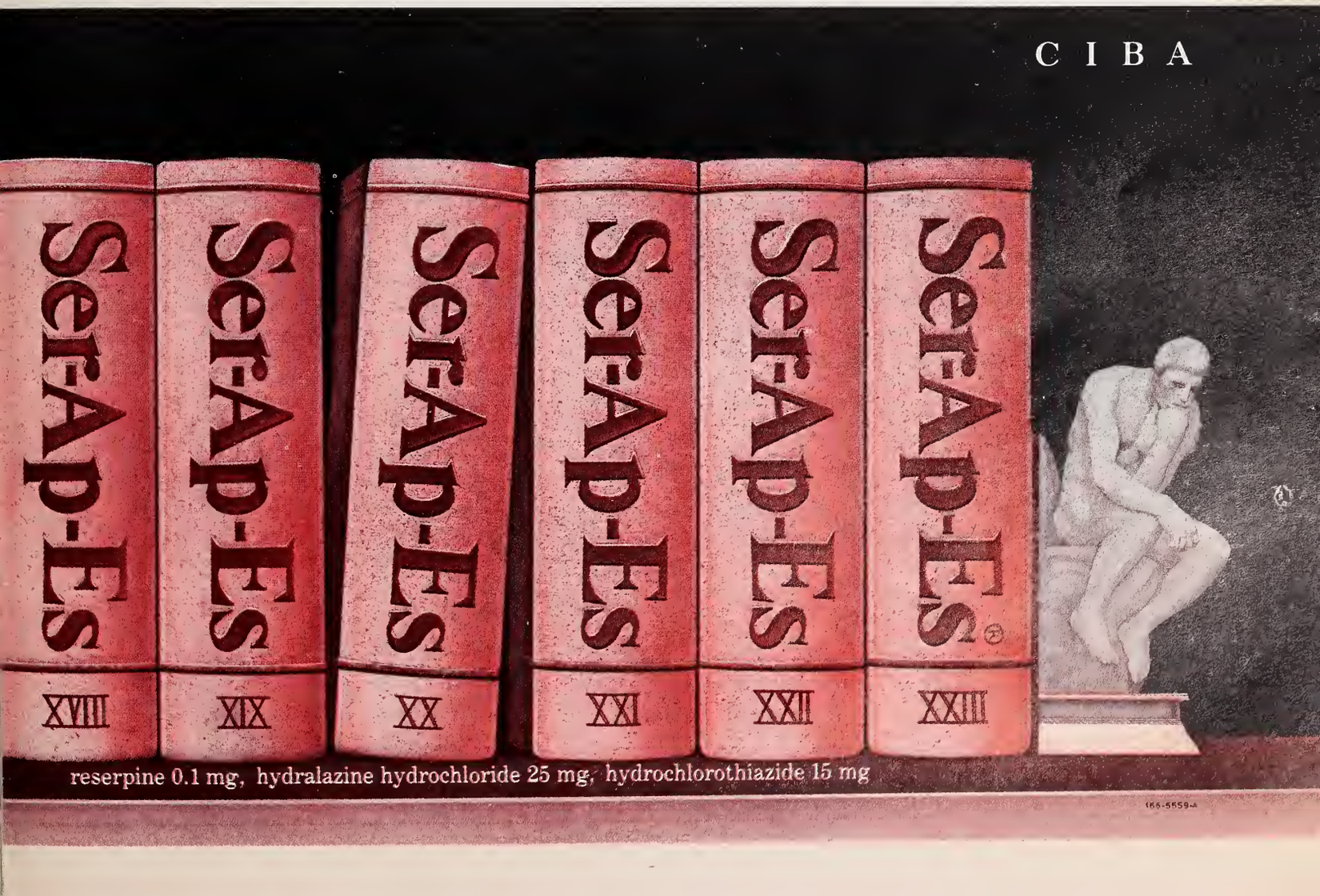
If we all work together with a sense of urgency and realism, the system that develops can be acceptable both to us as physicians and to our patients.

Some physicians will have very adequate patient volumes because of their affiliation with the cohort directors, be they traditional insurance companies, Medicare, or independent companies organized to market health care. Some physicians will have adequate patient volume because of their affiliation with academic institutions or because of their established prestige in the community. Other physicians, especially new graduates, may well not be able to develop sufficient patient volumes to meet their economic expectations or to maintain their professional skills.

Given the significant changes that have occurred in medicine over the past few years and the even more significant developments that are before us, it seems most appropriate for the Medical Association of Georgia to concentrate on these problems. In the past, physicians have tended to react to crisis after situations have occurred. This is certainly an understandable reaction. However, it seems to me that the time for reaction has passed. Creative, proactive, realistic attempts to deal with problems must be developed.

I suggest that the common bond of the M.D. degree is strong and that within this bond exists the creativity and innovation to effectively deal with the external pressures that impact on us all. Approximately one third of the physicians in Atlanta have HMO affiliations. The Blue Cross PPO will significantly increase this percentage of doctors involved in alternative delivery systems. The MAG House of Delegates has recently authorized the evaluation of an MAG "alternative" plan. The next few years will be critical ones for medicine. If we all work together with a sense of urgency and realism, the system that develops can be acceptable to us as physicians, as well as to our patients. I fear that if we fail to approach issues in this manner, if we attempt to deny external pressures, or allow ourselves to become fragmented and embroiled in internal strife, then the system that will be developed will exclude our input and may be devastating to us and detrimental to the people we serve.

Sincerely,
Frank M. Houser, M.D.
Medical Director
Southeastern Health Services, Inc.
Atlanta



MEDICAL MEETING CALENDAR

FEBRUARY

1-2—*Atlanta:* **Medical Association of Georgia Leadership Conference.** Contact MAG, 938 Peachtree St., N.E., Atlanta 30309. PH:404/876-7535 or 1-800-282-0224 (toll free in Ga).

1-2—*Atlanta:* **A Basic Course in Phacoemulsification and Extracapsular Cataract Extraction with Posterior Chamber Lens Implantation.** Category 1 credit. Contact Ginger Lineberger, Hallum-Arnold Eye Foundation, Inc., 3280 Howell Mill Rd., NW, Ste. 104, Atlanta 30327. PH:404/351-2713.

4-8—*Puerto Vallarta, Mexico:* **Ninth Annual Conference on Pain.** Category 1 credit. Contact Office of CME, Emory Univ. Sch. of Med., 1440 Clifton Rd., NE, Ste. 110, Atlanta 30322. PH:404/329-5695.

6-10—*Puerto Vallerta, Mexico:* **Scottish Rite 7th Annual Pediatric Postgraduate Course.** Category 1 credit. Contact Judson L. Hawk, Jr., MD, Dir. of Ped. Ed., Scottish Rite Children's Hosp., 1001 Johnson Ferry Rd., Atlanta 30363. PH:404/257-2040.

7-10—*Atlanta:* **Georgia Psychiatric Association Winter Meeting.** Category 1 credit. Contact S. Reaves Lee, MD, 1493 LaVista Road, NE, Atlanta 30324. PH:404/321-5259.

9-13—*St. Thomas, Virgin Islands:* **Clinical Problems in Gynecologic Surgery.** Category 1 credit. Contact Office of CME, Emory Univ. Sch. of Med., 1440 Clifton Rd., NE, Ste. 110, Atlanta 30322. PH:404/329-5695.

18-22—*Park City, Utah:* **Third Annual Winter Urology Seminar.** Category 1 credit. Contact Office of CME, Emory Univ. Sch. of Med., 1440 Clifton Rd., NE, Ste. 110, Atlanta 30322. PH:404/329-5695.

18-23—*Augusta:* **Family Practice Symposium.** AMA Category 1 and AAFP prescribed credit. Contact Div. of Cont. Ed., MCG, Augusta 30912. PH:404/828-3967.

20—*Atlanta:* **Prenatal Care: Nutrition, Drugs, Exercise.** Contact Ann Robinson, Dir. of Cont. Ed., College of Health Sciences, Ga. State Univ., Univ. Plaza, Atlanta 30303. PH:404/658-3066.

21-22—*Atlanta:* **Sickle Cell 1984: Problems and Issues.** Category 1 credit. Contact Dir. of Med. Ed., Morehouse School of Medicine, 720 Westview Dr., SW, Atlanta 30314.

22-23—*Augusta:* **Pediatric and Adolescent Gynecology.** Category 1 credit. Contact Div. of Cont. Ed., MCG, Augusta 30912. PH:404/828-3967.

23—*Atlanta:* **A Comprehensive Course on the ND:YAG Laser.** Category 1 credit. Contact Ginger Lineberger, Hallum-Arnold Eye Found., Inc., 3280 Howell Mill Rd., NW, Ste. 104, Atlanta 30327. PH:404/351-2713.

26—*Atlanta:* **Sexual Abuse and Exploitation of Children, Part II.** Contact Ann Robinson, Dir. of Cont. Ed., College of Health Sciences. Ga. State Univ., Univ. Plaza, Atlanta 30303. PH:404/568-3066.

MARCH

9-16—*Breckinridge, CO:* **10th Annual Snow Job in GYN/OB.** Contact Office of CME, Emory Univ. Sch. of Med., 1440 Clifton Rd., NE, Ste. 110, Atlanta 30322. PH:404/329-5695.

11-15—*Park City, Utah:* **The Injured Athlete: Prevention Management and Rehabilitation.** Category 1 credit. Contact Office of CME, Emory Univ. Sch. of Med., 1440 Clifton Rd., NE, Ste. 110, Atlanta 30322. PH: 404/329-5695.

11-16—*Augusta:* **20th Annual Family Practice Symposium.** AMA Category 1 and AAFP prescribed credit. Contact Div. of Cont. Ed., MCG, Augusta 30912. PH:404/828-3967.

13—*Augusta:* **Antepartum Electronic Fetal Heart Rate Monitoring Theory and Practice.** Category 1 credit. Contact Div. of Cont. Ed., MCG, Augusta 30912. PH:404/828-3967.

18-22—*Park City, Utah:* **Snowplow Orthopaedics: Selected Topics for the Primary Care Physician.** Category 1 credit. Contact Office of CME, Emory Univ. Sch. of Med., 1440 Clifton Rd., NE, Ste. 110, Atlanta 30322. PH:404/329-5695.

22-23—*Atlanta:* **Sports Medicine.** Category 1 credit. Contact Dir. of Med. Ed., Morehouse School of Medicine, 740 Westview Dr., SW, Atlanta 30314.

29-30—*Atlanta:* **Lasers for Ophthalmic Surgery (Argon/Krypton/Yag).** Category 1 credit. Contact Ginger Lineberger, Hallum-Arnold Eye Found., Inc., 3280 Howell Mill Rd., NW, Ste. 104, Atlanta 30327. PH: 404/351-2713.

APRIL

11-12—*Atlanta:* **Pharmacology for the Anesthesiologist.** Category 1 credit. Contact Office of CME, Emory Univ. Sch. of Med., 1440 Clifton Rd., NE, Ste. 110, Atlanta 30322. PH:404/329-5695.

13-14—*Atlanta:* **The Cardiac Patient: Management for Cardiopulmonary Bypass II.** Category 1 credit. Contact Office of CME, Emory Univ. Sch. of Med., 1440 Clifton Rd., NE, Ste. 110, Atlanta 30322. PH:404/329-5695.

13-18—*Atlanta:* **American Academy of Pediatrics Annual Meeting.** Contact AAP, 1801 Hinman Avenue, P.O. Box 1034, Evanston, IL 60204. PH:312/869-4255.

17-20—*Columbus:* **Georgia Association of Pathologists Annual Meeting.** Contact A. Bleakley Chandler, MD, President, GAP, MCG, Augusta 30912. PH:404/828-2923.

20-24—*Sea Island:* **Masters in GYN/OB.** Category 1 credit. Contact Office of CME, Emory Univ. Sch. of Med., 1440 Clifton Rd., NE, Ste. 110, Atlanta 30322. PH:404/329-5695.

21-25—*Atlanta:* **American Assn. of Neurological Surgeons Annual Meeting.** Contact AANS, 22 S. Washington St., Park Ridge, IL 60068.

25-27—*Atlanta:* **Practical Applications of Computers in Health Care: The Integration of Clinical and Administration Information.** Category 1 credit. Contact Office of CME, Emory Univ. Sch. of Med., 1440 Clifton Rd., NE, Ste. 110, Atlanta 30322. PH:404/329-5695.

25-28—*Savannah:* **MAG House of Delegates.** Contact MAG, 938 Peachtree St., Atlanta 30309. PH:404/876-7535 or 1-800-282-0224 (toll free in Ga.).

29-May 4—*Augusta:* **20th Annual Family Practice Symposium.** AMA Category 1 and AAFP prescribed credit. Contact Div. of Cont. Ed., MCG, Augusta 30912. PH:404/828-3967.

Georgia's Lamar Dodd: Artistic Interpreter of the Art of Surgery

The cover painting, "Heart Surgery," on this month's *Journal* is by Lamar Dodd, and is from the collection of Mary and Lamar Dodd. It has been a part of his critically acclaimed exhibition entitled *The Heart*.

A native Georgian, Lamar Dodd's career has been remarkably broad and productive. A great artist above all, he is also an innovator, administrator, creator of a major University Art Department, leading figure in national art organizations, and cultural ambassador to many foreign countries. He is Regent Professor Emeritus of Art, Lamar Dodd Professor Emeritus of Art, and Chairman Emeritus of the Fine Arts Division of the University of Georgia.

In 1977, working with friends at Emory University, Lamar Dodd began working in the world of medicine and heart surgery. With first hand experience, remarkable intellectual curiosity, and untiring concern for how we know life and how it can be meaningfully and beautifully portrayed, he has created a great new series of paintings that deal with patients, physicians, and surgical paraphernalia and procedures. The paintings elegantly show us the human and divine spirit in a new light.

As Virginia Trotter, Vice President for Academic Affairs at the University of Georgia, has pointed out, "In the past, Lamar Dodd's sensitive eye and compassionate heart have revealed his beloved Southland and his native North America to us with warmth and intensity. He has recorded humanity's venture into space in a fashion denied the camera. And now, out of the richness of his experience, the depths of his being, and the exquisitely tuned skills of his eye and hand, he has brought us moving and profound statements about suffering and healing, fear and hope, knowledge and mystery, the moment and eternity."

Mr. Dodd himself has said, "When I look at one of my paintings I have two reactions: one, that it has become a part of me and, secondly, that it continues to be a challenge. I cannot live with a work of art that tells me the whole story and leaves nothing for the imagination. I don't mind using the word *beauty*. I want a painting to be beautiful and to exemplify good taste. And it should be elegant. If one of my paintings makes the viewer feel a little better, then I would be very happy. This relates to the *quality of life*."

(Reported by Dr. Robert Copeland, La Grange.)

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Changes in the Traditional Practice of Surgery

GARLAND D. PERDUE, JR., M.D., *Atlanta**

THESE ARE CHANGING TIMES which demand a major adjustment in the traditional practice of surgery. We think of that traditional practice as being independent or with surgeons aligned in a small professional association or partnership practice. The individual surgeon builds a practice on the basis of his or her ability, availability, and affability. There has, however, been a trend toward larger associations and even participation in group multi-specialty practices. The young surgeon who joins an established practice is able to bypass some of the building stones essential to the development of a successful independent practice.

An overview of the changes involved in the delivery of surgical care, highlighting various trends designed to solve current problems.

Since the enactment of the Medicare and Medicaid legislation, there has been a major de-emphasis on charity work. Surgeons have become accustomed to a generous fee for service and regard a patient's insurance coverage as indemnity toward partial payment, with the patient paying the balance. There is an accelerating trend away from the global fee, traditional in the practice of surgery, to creation of an itemized statement of charges, often resembling a laundry list. The effect of such an itemization is to cause an increase in costs without specific increase in procedural fees. Most surgeons do continue to accept part-pay patients and to accept assignment of benefits when ability to pay is impaired. During the recent economic decline, local and state medical associations have encouraged physician participation in programs to offer medical care to those temporarily unemployed, uninsured, or otherwise impaired in their ability to pay. There is a return to the concept that we do have a professional responsibility to provide surgical services even when ability to pay is impaired.

There is a trend to rely on help outside the surgeon's office for business matters because of the complexity and cost. There is also increasing use of hospital facilities for ambulatory practice, not only for the x-ray department and the CT scanner, but also for such helpful services as the vascular diagnostic laboratory, the emergency department for after-hours calls, and ambulatory surgical centers for minor surgery. The surgeon's office is more and more devoted to consultations and brief examinations, and the surgeon has increased his interdependence with hospital and business service bureaus for other components of his practice.

Whatever euphemisms are coined to lessen the impact, allocation of limited resources implies selection of services to be provided, and thus, rationing of medical services.

All of these trends imply an ever-increasing involvement of multiple parties in the provision of surgical services which affect the traditional physician-patient relationship. With these multi-party relationships, there is an increasing trend toward

* Dr. Perdue is a general surgeon. This paper was presented at the 1984 Spring Meeting of the Georgia Chapter of the American College of Surgeons, held at the Emory University School of Medicine in March. Send reprint requests to him at the Emory University Clinic, Atlanta, GA 30322.

adversarial confrontations with hospitals, insurance carriers, various competitors, consultants, and assistants who provide professional services additional to those of the surgeon, monitoring authorities such as the Professional Standards Review Organization, and others. In our litigious society, these adversarial relationships often result in legal confrontations. This leads to a consideration of the first of three problems that I would like us to consider together.

It is essential that surgeons contribute to standards in their hospital which will require appropriate credentialing, monitoring of activity, and supervision of these independent practitioners.

There is a continuing crisis in medical/legal relationships, in alleged malpractice, and in liability insurance coverage. This crisis began to receive widespread attention a decade ago, and many insurance carriers withdrew from the provision of liability coverage. Both the cost and availability of insurance were so seriously affected that a number of steps were taken to diminish the impact of the crisis. Some statutory changes to more clearly define the statute of limitations and refine the judicial proceedings were helpful. Many state and local associations participated in the creation of so-called captive insurance companies, thus stabilizing premiums and at least making insurance coverage available. Attempts at arbitration or other means to reduce judicial proceedings have not been successful. In spite of these efforts, there remains a trend toward an increasing number of suits and toward provision of larger awards to plaintiffs successful in their legal proceedings. Thus, some of the captive companies are beginning to have problems with maintaining adequate reserves, causing a return to ever-rising premiums to maintain liability coverage. There is also a trend to identify institutions, such as hospitals, as responsible for maintaining professional standards and thus liable even for physician malpractice.

Physicians and hospitals alike must then share in the responsibility to take positive steps to control the problem. There is an increasing need for complete documentation of services with reasons, alternatives, and explanations being clearly indicated in the medical record. Hospitals will independently establish risk management programs in which physicians' patterns of practice will be evaluated in terms of complaints, alleged grievances, untoward incidents, and unsatisfactory outcomes. This will result in more strict consideration of applicants for hospital privileges and those seeking periodic re-credentialing. Professional credentials committees will have the mandate to consider these facts in the credentialing process, with imposition of restrictions of scope of practice and exclusions from practice in some instances. This in itself will lead to some confrontations and must be mitigated by strong physician participation in the risk management program, the credentialing program, and the clear documentation of actions taken, with reasons for these actions so that governing boards can more adequately exercise their responsibilities.

There is an increasing need for complete documentation of services with reasons, alternatives, and explanations being clearly indicated in the medical record.

A second problem for us to consider together is that of the control of costs of health care. The explosion in technologic and pharmacologic capabilities in the past few decades has made it possible for us to provide better care to many victims of disease or injury formerly not amenable to successful treatment. It is easy to propose the premise that we provide the best medical care available anywhere in the world. We have responded to requests for a certain elegance in the use of ancillary services and relative luxury in facilities and amenities. The public seeks assured access to health care services and an increased quantity of services, with enhanced expectations of success and restoration to health. Furthermore, comparable quality of services and amenities is established as the norm, regardless of the source of payment. The dictum that medical care

is a right, not a privilege, has been extended to include the assumption that all services shall be equally available to all applicants, regardless of social or economic status. The cost of providing medical services in the United States has gone past 10% of the gross national product and continues to rise. There is growing awareness that ever increasing costs cannot be supported. Physicians and hospitals both are affected by the fact that they have been asked to provide maximum medical care whatever the cost and now are damned for having done so.

Nevertheless, these changes in the traditional practice of surgery provide us with a challenge. . . .

A divergence between the ability to provide services and the willingness to pay for them leads to increasing action to control costs. Whatever euphemisms are coined to lessen the impact, allocation of limited resources implies selection of services to be provided, and thus, rationing of medical services. We have seen the development of health maintenance organizations, the philosophy of which necessarily is to minimize medical services as much as possible in order to enhance profit. We are seeing now the development of preferred provider organizations, with discounts for services rendered, to enhance market share. Various insurance carriers are asking for increasing patient co-payment and first-dollar payment and are imposing limitations of benefits. Many insurance carriers are attempting to achieve dis-indemnification with an assigned fee structure. Large employers are considering self-insurance with their own impositions of co-payments, limitations of benefits, and assigned fee structures. Negotiations between unions and management are impacted by these considerations, and the previous trend to provide full coverage as a fringe benefit of employment is undergoing major reappraisal. Our government has enacted legislation to impose a prospective payment system on hospitals and foresees imposing this on physicians as well. Hospitals are thus re-defined as business and are at risk for either profit or loss. Since loss is intolerable, hospitals will impose certain limitations of services and allocations of resources at the local hospital level. The effect of this can be lessened by physician collaboration with hospitals in the effort to improve standardization and efficiency and to seek alternative care plans less likely to have a negative impact on hospital finances. Surgeons should collaborate in this process and should undertake self-examination for improved volume and efficiency and improvement in their own patterns of practice. We physicians have become somewhat indiscriminate in the application of services and allowance for maximum length of stay. We apply standards for critical care medicine to all patients and have partially discarded the vital element of judgment in defining who should receive what services. Our professional standards will actually be improved if we return to a concept of discriminate selection of diagnostic studies, appropriate lengths of stay, and therapeutic services to be provided. Once again, it is essential that we document the services provided and collaborate with hospitals in providing an appropriate medical record to obtain appropriate payment for services rendered.

We have responded to requests for a certain elegance in the use of ancillary services and relative luxury in facilities and amenities.

We should not, however, accept the premise that physicians' practice patterns control hospital costs. The occurrence of disease and injury determines the number of patients to be hospitalized, and hospital administrative practices contribute equally to costs as do physician practices. The largest components of costs in any hospital are those of personnel salaries, materials and supplies, and other operational costs. All too often, there is little physician input into determination of these needs. Many programs which are nonmedical in nature are at least partially competitive with those which are. The size and scope of activities of the hospital's education service, the social services department, the chaplaincy program, and the number of personnel required to create policies, procedures, and guidelines, to establish risk management, to perform utilization review, to supervise various departments — all these are competitive needs to selection of medical programs to be offered. It is essential that physicians contribute to the decision-making process in its early stages. Physician knowledge or even review after the fact is in no way equivalent to participation in planning and

policy making. There should be physician involvement in hospital administration to provide input to professional goals, including quality of care. If limitation of the quantity of services or the allocation of resources is to be acceptable, it is essential that physicians closely monitor the quality of care being given.

A third problem to address together is that of the predicted physician oversupply and increasing independent paraprofessional practice. We have seen the growth of the numbers of para-professionals such as occupational or physical therapists, nurse anesthetists, nurse practitioners, and physicians assistants. Demands on the part of many of these practitioners for independent practice are increasing and are partially successful. The American Medical Association and others capitulated to these demands in the revision to the standards of the Joint Commission on Accreditation of Hospitals (JCAH), in which independent practice may be permitted at a hospital's discretion. Para-professional activity which is poorly regulated and unsupervised will inevitably lower standards of care. The new JCAH standards shift the burden from a national organization to the local hospitals, and it is predictable that many of these hospitals, especially those which are investor-owned or those with a high vacancy rate, will permit increasing independent practice. It is essential that surgeons contribute to standards in their hospital which will require appropriate credentialing, monitoring of activity, and supervision of these independent practitioners.

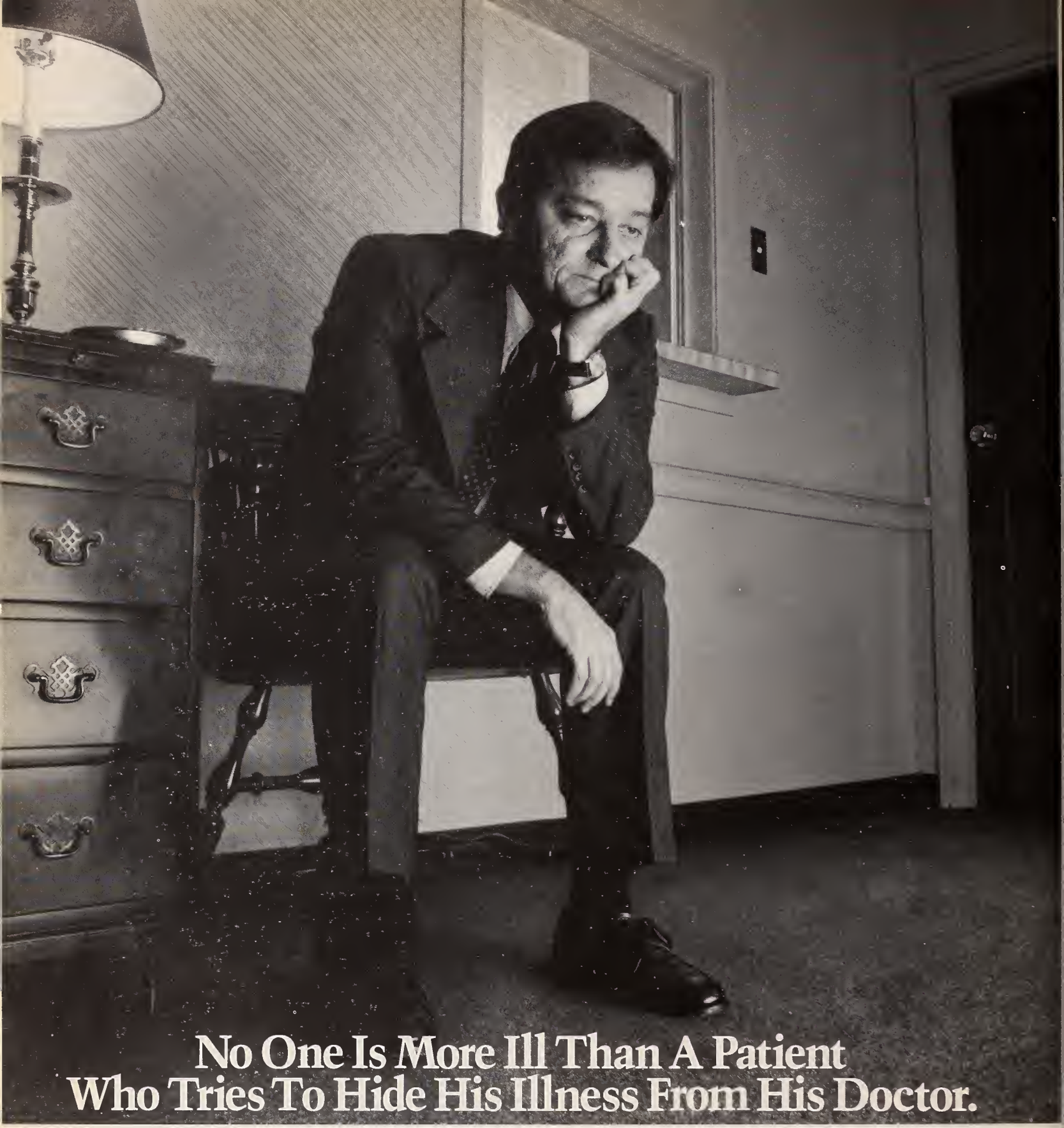
There should be physician involvement in hospital administration to provide input to professional goals, including quality of care.

A third problem to address together is that of the predicted physician oversupply and increasing independent para-professional practice.

The predicted physician oversupply will result in difficulties for younger physicians seeking to gain access to the medical care system. Already we see such difficulties in more desirable locations and in the larger metropolitan areas most attractive to young surgeons interested in applying their skills. Demonstration of ability is nowadays often long deferred until availability and affability have had their impact. Younger surgeons are likely to accept with increasing frequency salaried positions in hospitals, participation in commercial group provider plans, and participation in other groups targeted toward selected activities, such as emergency centers, ambulatory surgery centers, and others sometimes pejoratively referred to as "Doc-in-a-Box." Many will seek alternative careers in low level administration or monitoring and review activities. They will not be able to bring the fruits of the trials, tribulations, and rewards of professional practice to these activities.

The occurrence of disease and injury determines the number of patients to be hospitalized, and hospital administrative practices contribute equally to costs as do physician practices.

All of this means a regrettable application of commercial standards, sometimes to the detriment of professional standards. Concepts of regulation and control, of marketing, of pricing and discounting, and of selective application of medical services are foreign and somewhat repulsive to those of us who see our profession as involved in a constant effort to rise above self seeking and personal advantage. Nevertheless, these changes in the traditional practice of surgery provide us with a challenge in the sense described by Henry Bahnson in his presidential address to the American College of Surgeons in 1983. He defines a challenge as a stimulus to call forth the highest and best we have to offer. Our challenge is to preserve and enhance high quality medical care. The challenge provides the opportunity to define and refine standards of high quality care, to participate effectively in the development of plans for allocation of limited resources for most effective use, and to contribute in a collaborative way to all of those third parties intervening in the physician-patient relationship so that we may continue to identify and seek solutions to problems, to contribute to public understanding, and in the end to offer our highest and best to our patients.



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Georgia's Surgical Leaders

JOSEPH M. VAN DE WATER, M.D., *Macon**

GEORGIA HAS ALWAYS been a fertile ground for our country's leaders. Names such as Jimmy Carter, Carl Vinson, Walter George, Richard Russell, Herman Talmadge, and Eugene Talmadge come readily to mind, as well as that of our present greatly respected senator, Sam Nunn. In the field of medicine, we think of Crawford W. Long, who in 1842, as a family practitioner in Jefferson, Georgia, was the first person to successfully use ether anesthesia. With great pride, surgeons recall Alfred Blalock of Culloden, who set modern day standards for surgical excellence and surgical training, especially as a pioneer in cardiac surgery in this country and throughout the world and as the Chairman of Surgery at Johns Hopkins from 1941 until his death in 1964. Our leadership in surgery continues to grow. Today, Georgians are Chiefs of Surgery in seven of our nation's medical schools. This places us in a third-place tie with Ohio, behind New York with 12 and Pennsylvania with eight.

Edward M. Copeland, III

Edward M. Copeland, III, M.D., was born in Augusta in 1937. Most of his early life was spent in McDonough, the family home of both his physician father and famous uncle, Murray M. Copeland. He received his M.D. degree from Cornell in New York in 1963 and served his internship and residency at the University of Pennsylvania. Completing that in 1959, he went directly into the Army, earning the Bronz Star in Vietnam. In 1971, he went to the M. D. Anderson Hospital of the University of Texas in Houston where he served a fellowship and subsequently joined the staff, reaching the rank of Professor at age 39. Six years later, in 1982, as a distinguished cancer surgeon, he accepted the Chairmanship of the Department of Surgery at the University of Florida in Gainesville.

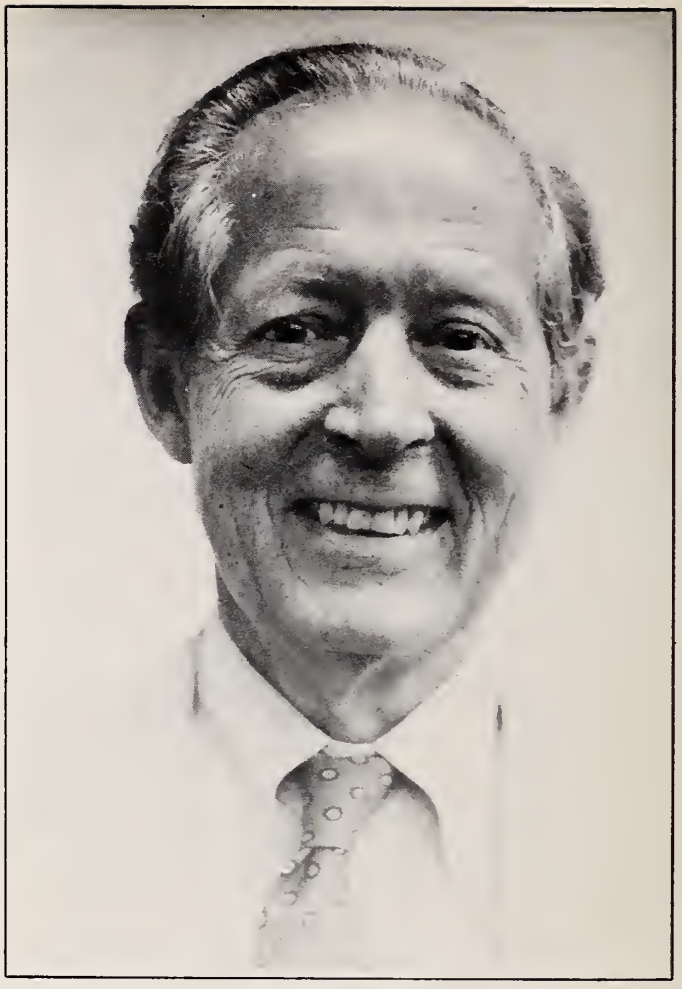


Edward M. Copeland, III, M.D.

* Dr. Van de Water is Professor of Surgery, Medical College of Georgia, and Mercer University School of Medicine, 1550 College St., Macon, GA 31207.



Milford B. Hatcher, M.D.



Richard T. Myers, M.D.

Milford B. Hatcher

Milford B. Hatcher, M.D., was born, raised, and has continued to live in Macon. He earned his M.D. degree in 1935 from the Medical College of Georgia where he was first in his class. He remained in Augusta, serving his internship and residency at the University Hospital before returning to Macon. Except during World War II, in which he served 5½ years rising to the rank of Lt. Colonel, he has continued to practice surgery in Macon. Dr. Hatcher's longtime goal — to put more physicians into the many communities of rural Georgia — was more nearly reached with the establishment in 1981 of a medical school dedicated to Family Practice. It was thus most fitting that this accomplished Macon surgeon was chosen to be the first Chairman of the Department of Surgery at the Mercer University School of Medicine in Macon.

Richard T. Myers

Richard T. Myers, M.D., was born in Macon in 1918. His M.D. degree was earned in 1943 from the University of Pennsylvania where he remained for 2 more years as an intern and resident in Internal Medicine before serving in the Navy. He returned with surgery as his goal, which he pursued at Bowman Gray, completing his residency in 1949. He then stayed on that staff where his energy and enthusiasm carried him quickly through the ranks, so that in 1968 he became Chairman of the Department of Surgery at Bowman Gray School of Medicine of Wake Forest University in Winston-Salem.

James W. Pate

James W. Pate, M.D., although born in Wedowee, Alabama, in 1928, considers Waycross, where he grew up, as his home town. In 1950, upon receiving his M.D. degree from the Medical College of Georgia, he went to the National Naval Medical Center at Bethesda, spending 2 years as a surgical house officer, and 2 more years as Chief of Experimental Surgery, which gave him the unique opportunity to work closely with and be influenced by Dr. Alfred Blalock. He obtained and processed the artery grafts used by the Johns Hopkins Surgery Department and also helped train two of Dr. Blalock's young residents, Dr. Frank Spencer (now Chairman at NYU) and Dr. Alex Haller (now Chief of Pediatric Surgery at Hopkins). He then went to the University of Alabama to finish his General Surgery Residency. He completed his Thoracic/Cardiovascular training in Memphis in 1957 where he quickly rose up through the ranks, becoming a full Professor in 1965 and in 1974, Chairman of the



James W. Pate, M.D.



H. Harlan Stone, M.D.

Department of Surgery at the University of Tennessee.

H. Harlan Stone

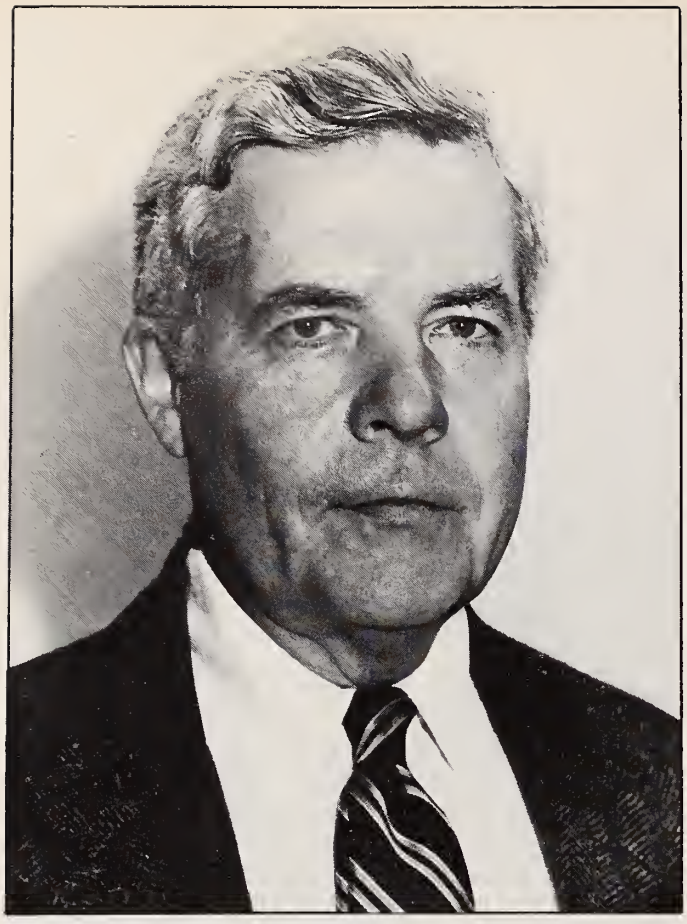
H. Harlan Stone, M.D., was born in Atlanta in 1930. In 1955, he received his M.D. degree from Emory University. After spending 1 year as an intern at Johns Hopkins and 2 years in the Army at Ft. Benning, he returned to complete his residency at Grady Hospital in Atlanta in 1962. He remained in Atlanta where he rose through the ranks at Emory while tirelessly working with trauma victims, especially those with burns and infections. In 1983, he left Atlanta to become Chief of General Surgery at the University of Maryland in Baltimore.

Samuel A. Wells, Jr.

Samuel A. Wells, Jr., M.D., was born in Cuthbert in 1936. He received his M.D. from Emory University in 1961. The next 2 years were spent in Internal Medicine at the Johns Hopkins Hospital before he switched, finishing a surgical residency in 1970 at Duke University Medical Center. He remained on the faculty at Duke where he acquired considerable expertise in tumor biology and cancer surgery, rising quickly to Professor in 1975. In 1981, he moved to St. Louis, Missouri, as Chairman



Samuel A. Wells, Jr., M.D.



G. Rainey Williams, M.D.

of the Department of Surgery at Barnes Hospital and the Washington University Medical Center.

G. Rainey Williams

G. Rainey Williams, M.D., was born in Atlanta in 1926. He received his M.D. from Northwestern in 1950 and then went directly to Johns Hopkins where he had the good fortune to study under Georgia's renowned Alfred Blalock. Upon completion of that residency in 1958, he went to his current location where his superb technical skill and surgical judgment earned him a professorship in 1963. In 1974, he became Chairman of the Department of Surgery at the University of Oklahoma in Oklahoma City.

Thus it is that seven Georgia surgeons today stand tall on the shoulders of their fellow Georgian, Alfred Blalock. Our salute to them must surely offer encouragement as well as pride and tradition to those Georgians in training today who may well be our country's surgical leaders of tomorrow.

Acknowledgement

My thanks and appreciation go to Mrs. Dorothy C. Herin, Medical Librarian of the Medical Center of Central Georgia, who helped with the statistics, and to Miss Doris Williams, R.N., Administrative Assistant to Dr. Hatcher, who helped with the historical and grammatical content.

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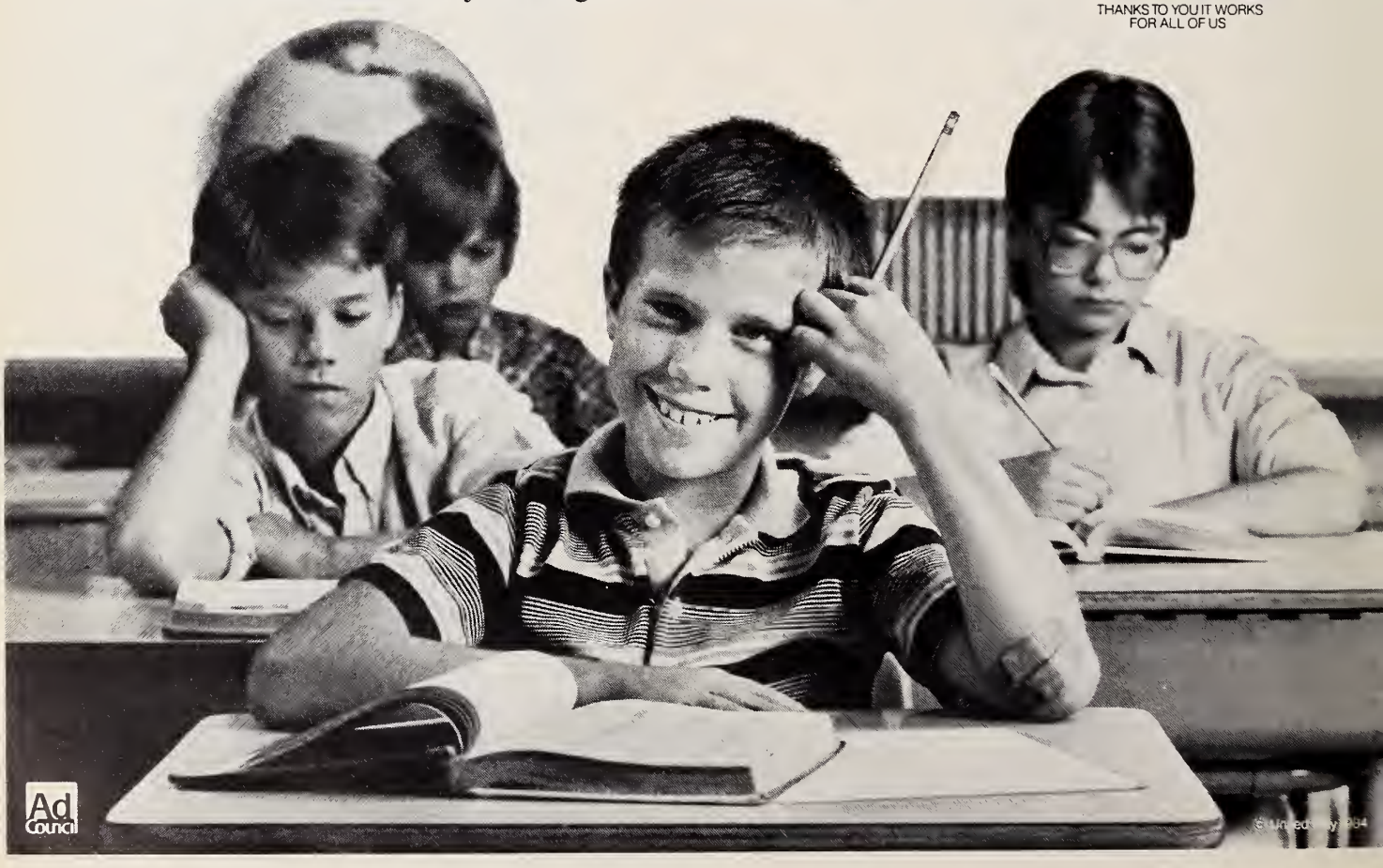
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Renaissance Man

by Corbett H. Thigpen, M.D.*

Hervey Milton Cleckley was a master physician and instinctively practiced the art of medicine. He had the simplicity of true greatness, the open mind of true wisdom, and the meekness of true strength.

Hervey Milton Cleckley became one of only four psychiatrists in Georgia in private practice when he joined the staff of the Medical College of Georgia (MCG) about 1937. His vast knowledge, innate understanding of people, gentleness of manner, and capability of conveying the goodness of the true physician quickly endeared him to patients and students alike. He rapidly advanced to the forefront of American psychiatry. He culminated his psychiatric honors when he recently became a Life Fellow of the American Psychiatric Association. Acclamation of his talents are numerous.

To students who were at MCG in the 1940s and '50s, these were the legendary years. These were the times when it was said that, "Giants walked the halls": Virgil Sydenstricker, Perry Volpitto, Lombard Kelly, William F. Hamilton, Richard Torpin, Robert Greenblatt, and Ray Ahlquist. Of equal stature and taller than most was Hervey Milton Cleckley. His lectures were so entrancing one could hardly take notes. He was a remarkable teacher — a living legend, and one whose reputation will persist.

No aspect of psychiatry has failed to be graced by his learning and his pen: psychopathology, psychotherapy, psychopharmacology, electrotherapy, psychologic theory — anything dealing with functions of the mind. He wrote dozens of papers in psychiatry and wrote many chapters in textbooks.



Dr. Hervey M. Cleckley

He initially became world renowned with the first edition of *The Mask of Sanity* in 1940. He revised it several times, still of the opinion that no one knew the cause of the psychopathic personality and no one knew a cure.

In 1957, he received the Georgia Writers Association Literary Achievement Award for Non-Fiction after he co-authored *The Three Faces of Eve*. That book also became world renowned. Both of these books are to this day considered classics in psychiatry. He was one of the few people who lived to see themselves and their work adapted to motion pictures by Hollywood.

The third book, and the one which he always believed to be his best and most important, is little known. It is the study of pathologic sexuality done in a straightforward, scientific manner, without pandering. He was particularly intrigued by its influence on social, psychiatric, and literary manifestations. He did not reject the pervert as a person — indeed, he had the greatest of compassion for these unfortunates. Powerful and persuasive is his conviction that love between man and woman is among the most noble of mankind's emotions. He handled his words with the grace of a fencer, but they fell with the force of a mace. Few copies of this great study, *The Caricature of Love*, are still available.

Doctor Cleckley once said, "If ever I could have a last will and testament, I would more than anything want it said of me that I saw the utter folly of the Freudian theory and did what I could to reveal its foolishness.

* Dr. Thigpen is Clinical Professor of Psychiatry at the Medical College of Georgia and longtime medical associate and partner of Dr. Cleckley. Send reprint requests to him at the University Medical Center, 820 St. Sebastian Way, Suite 3-D, Augusta, GA 30902.

The Freudian and so-called dynamic theories have set psychiatry back in America over fifty years. Nothing has been more harmful to the mentally sick of this nation."

"I would more than anything want it said of me that I saw the utter folly of the Freudian theory and did what I could to reveal its foolishness."

A number of his later writings were critiques of various aspects of the Freudian Psychosexual Theory. Two days before his death, he was laughing over the article in the February, 1984, issue of *The Atlantic Monthly* entitled, "Freud and the Seduction Theory." He commented that it was no wonder Freud and members of his family had tried to suppress the seduction theory. Doctor Cleckley observed, "What a jamboree!"

Doctor Cleckley was born in Augusta, Georgia, in 1903. He graduated from Richmond Academy where he was renowned for his athletic prowess. He majored in mathematics and science at the University of Georgia. He was editor of the yearbook, *Pandora,* and was a Phi Beta Kappa. His football feats are legend; he played without benefit of an athletic scholarship. The records at Georgia in the 440 meter and in the high and low hurdles he held for many years. He was captain of the track team.

Doctor Cleckley was selected to receive the highest, rarest, and most coveted scholastic honor offered — the Rhodes Scholarship. He graduated from the University of Oxford in England with a degree in physiology. While there, he became Intercollegiate Heavyweight Boxing Champion of Europe. He also continued his first athletic love: track. In 1926, he entered the Medical College of Georgia, where before his graduation as a medical doctor he was selected for the Alpha Omega Alpha.

He interned and had a 2-year surgical residency in Augusta. Soon afterward, he became a staff psychiatrist at Lenwood V. A. Hospital for several years. There, he acquired his psychiatric and neurologic experience. Through largely personal effort and study, he prepared himself and became a Diplomate in each of the Boards of Neurology and Psychiatry. After he joined the illustrious faculty of the Medical College, he created the Department of Psychiatry and Neurology. He became a full Professor and Chief of Psychiatry until 1953, when he chose not to accept a proffered full-time appointment (newly created). He did not wish to become an institutional physician but preferred private general practice in psychiatry. He accepted a clinical professorship and finally became Professor Emeritus.

Until now only his achievements have been covered, but little has been said about the man.

He was a person of unusual modesty and deep humility. He was without malice or meanness. He never said or did a shabby thing. Those of even brief acquaintanceship quickly sensed that he was a person of such character that they were not likely to encounter one like him again. He possessed great wisdom. Soft spoken and of few words, his observations were penetrating. There was a solemnity about him that demanded dignity and respect.

Hervey Cleckley was a deeply religious man. He felt that man's ability to comprehend an all encompassing Power was exceedingly limited. Man's efforts were often naive and simplistic. He deplored the arrogance and sweeping dogmatism frequently displayed by various religious authorities, but he believed that man's need for that Power was not only universal but impelling. He never found organized religion adequate for him personally.

He was ever searching for Truth; "it is burnished by criticism, it will shine through all efforts to conceal it or to destroy it."

He possessed "infinite humor and jest." He had merriment and overflowed with mirth. A good joke brought guffaws from him. He took pleasure in harmless practical pranks. He was not beyond joining up his friend, the very proper Virgil Sydenstricker, M.D., to a sexually oriented lonely hearts club. He rarely used wit and would never hold a person to scorn.

He handled his words with the grace of a fencer, but they fell with the force of a mace.

He was revered and loved by every person who knew him. He was widely read, loved knowledge, and constantly increased his learning. He was a keen observer of mankind. He was a scholar and a grammarian. His well studied library filled several rooms. Research along strict scientific principles occupied much of his time. Two papers were accepted for publication in 1983, and two more are in final stages.

He delighted in poetry and quoted volumes from memory. He had no favorite poem, but a certain verse or line of verse moved him deeply. Among these were Le Panto, some of Housman's poems, a few lines of Swinburne, much of Homer, and hundreds of lines from Shakespeare. His literary knowledge was vast. He abhorred the snobbishness often seen in the cognizance of literature. He enjoyed a good drink, the presence of friends, enlightened conversation, and the recitation of poetry — to him that was a fine evening.

Despite his interest and attachment to his work, he was glad when the day was over and he could go to his home that he loved so much. He adored his first wife beyond measure. Her death was devastating to him. It was as if darkness had inherited the earth. He threw himself into revising the fifth edition of *The Mask of Sanity*. Little by little, over the years he recovered his former perspective of life. His second wife, Emily, fulfilled all of his needs, and she came to occupy all things in his affections. No women were ever loved more, and I know of no women who gave more in return.

He was a master physician and instinctively practiced the art of medicine. His patients treasured his presence. He was never too rushed to spend whatever time was required for his patients or students. He loved people. His capacity for understanding and empathy seemed without end. He was a friend beyond compare.

Soft spoken and of few words, his observations were penetrating.

One must comment on one of many jokes that he unwittingly pulled on himself. Once while he was teaching class, a violent rainstorm came up. He chanced to glance out of the window and saw his treasured convertible becoming drenched, as windows and top were down. He excused himself and hurried madly down to correct the situation. When he got back to the classroom, the students were practically rolling on the floor. In his haste he had put up the windows, but left the top down!

Hervey Cleckley was a true gentleman, the soul of courtesy and graciousness. He had the simplicity of true greatness, the open mind of true wisdom, and the meekness of true strength. Honor was his name.

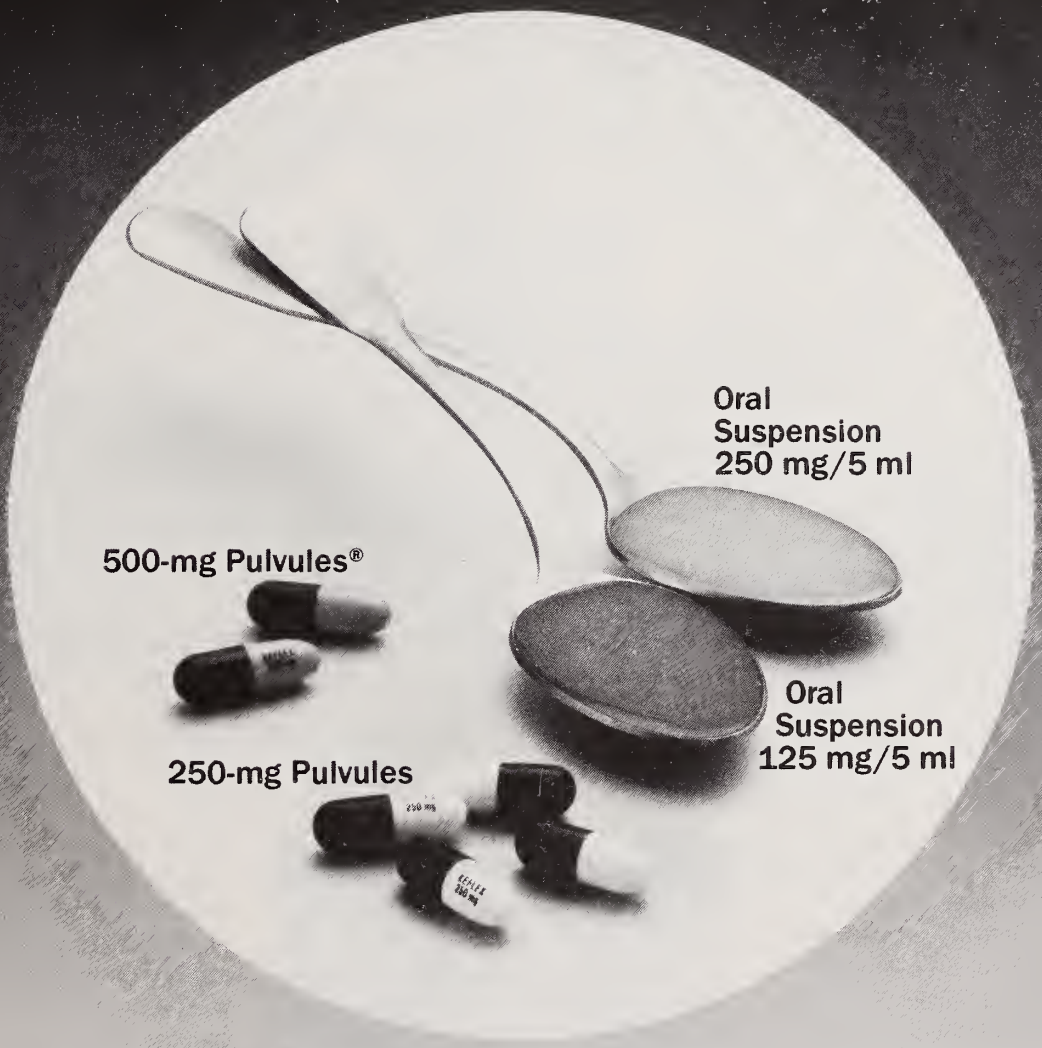


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Dr. Lois T. Ellison: A Leader in Georgia Medicine

by Evelyn Ward Gay*

As Provost of the Medical College of Georgia from 1975 to 1984 and now Vice President for Academic Affairs, Dr. Ellison has been second only to the President of MCG as an administrative officer at that institution.

When Lois Taylor was a young girl living in Athens, Georgia, she thought that the greatest thing she could do would be to grow up and attend the University of Georgia. Today, as Dr. Lois Taylor Ellison, the Augusta physician has far surpassed that youthful ambition. She is recognized as one of Georgia's leading women in medicine, as well as one of the top women physicians in the country to hold a high position in medical education. As Provost of the Medical College of Georgia (MCG), from 1975 to 1984, and now Vice President for Academic Affairs, she has been second only to the President of MCG as an administrative officer at that institution.



Dr. Lois Taylor Ellison

The duties of her office during the past decade have been many and varied. As chief academic officer, she has reported to the President and has been his advisor in all academic affairs, including faculty appointments and promotions, curriculum and program development, and research activities. The deans of the five schools which make up the Medical College of Georgia (Medicine, Dentistry, Graduate Studies, Allied Health Sciences, and Nursing) related to the Provost in regard to academic matters. She was administratively responsible for the Division of Continuing Medical Education, Educational Research and Development, Health Communications, Laboratory Animal Resources, Library and Research Administration, and Environmental Safety, including Radiation Safety and Biological Hazards. The Provost was also the Equal Employment Opportunity/Affirmative Action Officer and the Title IX Coordinator at the Medical College.

* Mrs. Gay is Chairman of the Research and Romance of Medicine Committee of the Auxiliary of the MAG. Her address is 911 Vistavia Circle, Decatur, GA 30033.



The Old Medical College, Augusta

Much of Dr. Ellison's success in life could have been predicted during her early years. Born in Fort Valley, she moved with her family to Athens when her father, who had been engaged in farming, became employed at the University's Extension Service. When she entered Athens High School, her leadership qualities immediately surfaced. She was inducted into the Beta Club and the National Honor Society, and was appointed editor-in-chief of the biweekly school newspaper. After 3 years on the varsity basketball team, she was made captain in her senior year. She also held the number one position for 3 years on the varsity tennis team, becoming captain in her senior year and winning the Georgia State High School Singles Tennis Championship. She was graduated at age 16 as honor student and commencement speaker.

Upon enrolling at the University of Georgia, she became a member of the "Z" Club (freshman honor society) and was named its president. Later, as president of Mortar Board, secretary of Alpha Delta Pi Sorority, a participant in extramural sports, and a member of the Athletic Board, she was named to *Who's Who in American Colleges and Universities,* at the same time completing requirements for a B.S. degree in chemistry and zoology in less than 3 years.

"But I always knew I wanted to study medicine," she recalled 1 day recently in discussing her progress in the field she loves.

It was early afternoon on a cool but sunny Saturday when she came to meet a visitor in the parking lot near the old red brick building in the center of the campus at the Medical College of Georgia in Augusta. After leading the way up the back steps to the elevator and down a hallway lined with portraits of former presidents of the state's oldest medical school, she opened the door to her large, attractive office adjoining the President's suite. There were no visible signs here of the modern "women's liberation movement," or of a woman who flaunted her accomplishments in "a man's world." The sincere hospitality of a warm and friendly lady, who obviously has always been in the forefront of anything she has attempted, made the visitor feel instantly welcome.

Yet, in a quiet but uncomplaining tone, she revealed that all had not been simple for her in reaching her goal. There had been a few unforeseen obstacles along the way. She had encountered no problems, however, in being accepted to the medical school in Augusta at the age of 19, just 1 month after her graduation from college in March of 1943. Her male classmates were always fair to her, she says, and the other girls in her classes were friendly and intelligent.

The first 5 minutes of an interview with this busy woman at the Medical College of Georgia gave a clue to the main reason behind her many accomplishments. She possesses a vital ingredient for getting along with peo-

ple: the ability to see good in others while calmly maintaining her own high standards. It was easy to understand why several of her associates refer often to her as "a very nice person."

It was wartime when Lois Taylor began her medical studies. The school had gone on an accelerated schedule, and she was due to receive her M.D. degree in March of 1946. In February of 1945, she was married to Dr. Robert Gordon Ellison, a 4th year resident in surgery. Six weeks later she became ill and was diagnosed as having pulmonary tuberculosis. It was necessary for her to take a leave of absence for treatment, and she was out of school for 4 years. Instead of graduating in 1946 as planned, she received her M.D. degree in June of 1950. But she has put the bad years behind her. Since that time, she has been in excellent health.

Her first job was establishing the cardiopulmonary laboratory at Augusta's University Hospital in 1951. "It was a new era in cardiopulmonary diseases," she explains, "and cardiac catheterization had just begun." She became a research associate in physiology that year, and as she completed further training at the medical college, she moved steadily upward through the ranks to become in 1971 Professor of Medicine and Surgery and Associate Professor of Physiology, titles which she still holds.

But, says Dr. Ellison with a laugh, she had to work very hard to make up for the time she had lost due to her illness, not only in her professional career but in her personal life as well. Within a period of 6 years, between 1953 and 1959, she had 5 sons. With the birth of each, she says, she took only about 2 weeks off, but she was fortunate to have adequate help. The woman she hired 30 years ago to assist with her growing family is still with her. And her husband, by then a thoracic surgeon on the medical school faculty, shared all the duties of bringing up the 5 children. The 3 oldest of those sons are now physicians who graduated from the Medical College of Georgia. The 4th is an Augusta attorney, and the youngest, with a B.S. in political science and a BBA degree, is in business.

At the time Drs. Robert and Lois Ellison began their careers at the school, there were only three buildings on 45 acres of land, and these housed facilities for the training of physicians only. There were 100 full-time employees, 20 interns and residents, and a budget of $300,000. Today, there are 70 buildings on 78 acres of land, and these comprise facilities for training physicians, dentists, nurses, and students in allied health sciences and graduate studies. There are 400 interns and residents, 5,000 employees, and a budget of $149 million.

Along with the growth of the school, Dr. Lois Taylor Ellison has advanced in her role as a leader. Since 1956, when she was awarded a research fellowship by the Georgia Heart Association to become an established investigator, she has received the research career award from the National Heart Institute, National Institutes of Health, and has been named to membership in 11 professional organizations. These include the American College of Chest Physicians, the American Medical Women's Association, the Association of American Medical Colleges, and the Southern Society for Clinical Investigation. She is also a member of Alpha Omega Alpha, medical honor society, and Sigma Xi, and holds an honorary membership in the Omicron Kappa Upsilon, the honor society of the dental school. She has served in many capacities with the Georgia Affiliate of the American Heart Association, including a member of the Board of Directors since 1979, president of the organization in 1982-1983, and as a delegate to the annual assembly of the national organization in 1983.

She possesses the ability to see good in others while calmly maintaining her own high standards.

The American Lung Association of Georgia (formerly Georgia Lung Association) named her to its Board of Directors in 1965, a position she still holds, and she served as president in 1984. In the Georgia Thoracic Society, she has been secretary and president and chairman of the Tri-State Consecutive Case Conference Steering Committee. She has been on the MAG's Committee on Education since 1977, and on the Subcommittee on Medical Schools since 1979, and was that committee's chairman from 1979-1981, as well as serving on the Committee on Women Physicians in Organized Medicine and that group's chairman from 1979-1983.

Dr. Ellison has been active in health planning in Georgia. She was a member of the Pulmonary Task Force, Georgia Regional Medical Program, in 1971-1972. In 1978-1979, the MAG placed her on its Health Planning Committee, and she served with the East Central Georgia Health Systems Agency, on its Board of Directors, and as treasurer during 1976-1980. She received a Governor's appointment to the Statewide Health Coordinating Council in 1980 and was reappointed for a 3-year term to run until 1985. However, this council was abolished by the Governor on June 30, 1983.

Dr. Ellison also serves on the Board of Directors of the Medical College of Georgia Foundation, Inc., is secretary of the School of Medicine's Alumni Association, on the Board of Directors of the Medical College of Georgia Research Institute, American Council of Education (National Identification Program for the Advancement of Women in Higher Education Administration), the Council of the Georgia Radiation Therapy Center at Augusta, and serves at the Dwight David Eisenhower Army Medical Center as Surgeon General Consultant and member of that hospital's Education Committee.

Her affiliations with other than professional organizations have included the Coal Mine Health Research Advisory Council, National Institute for Occupational Safety and Health, Department of Health, Education and Welfare in 1972-1975, and the Oak Ridge Associated Universities since 1979. She is currently on that group's Board of Directors.

Dr. Ellison also has been active in community affairs, including the United Way of Greater Augusta since 1975, on its Board of Directors and



Dr. Lois Taylor Ellison and her husband, Dr. Robert Gordon Ellison, pose with their 5 sons, left to right rear: James Walton, John Charles, Mark Frederick, Gregory Taylor, and Robert Gordon Ellison, Jr. The 3 oldest sons from the right are physician-graduates of the Medical College of Georgia.

chairman of its Hospital and Health Division, and a member of the Division of Colleges and Universities. As a member of the Trinity-on-the-Hill United Methodist Church, she has served on the administrative board from 1974-1977, and on the Pastor-Parish Committee from 1978 to the present. She is a Sunday School teacher and has been a member of the Wesley Foundation Board of Trustees since 1978. The Chamber of Commerce of Greater Augusta named her to its Board of Directors in 1979-1981. In 1982, along with her husband, she received the Golden Deeds Award presented by the Exchange Club of Augusta. Other boards on which she has served include Junior Achievement of Augusta and the YMCA.

Dr. Ellison is in demand as a public speaker before both professional and lay groups. She has made presentations on a regular basis at national scientific meetings and for MCG's CME programs on topics ranging from research in cardiac and pulmonary diseases to preoperative and postoperative management, interpretation and use of blood gas analyses, pulmonary function, and acid base evaluation. She appears frequently before civic clubs, at lecture series and conferences, speaking often on such subjects as "Beyond Credentials," "Shaping our Destiny: Techniques for Moving Up in Higher Education," "Understanding Politics and Power in Getting Ahead," "You and Me and Medical Education," "The Changing Role of Women," "Continuing to Grow as a Person," "The Economics of Health Care," "Ethical Dilemmas of our Times," "The Paradox of Conservative Change," "Women in Dialogue," and "The Boss and the Professional Secretary." Since 1955, she has been author or coauthor of 73 publications.

"I believe that I can do a better job administering by keeping in touch with hospital functions. . . ."

After becoming the Associate Dean of the MCG in 1974, Dr. Ellison says, she had to reduce her clinical workload. When she became Provost in 1975, she had to drop even more of her clinical responsibilities. She no longer participates in direct patient care but is still medical director of the pulmonary blood gas laboratory.

"I believe that I can do a better job administering by keeping in touch with hospital functions and the needs of the hospital," she declares.

In 1984, Dr. Ellison's title was changed from Provost to Vice President for Academic Affairs under a reorganizational plan created by the new president of the school. Dr. Jesse L. Steinfeld, former Surgeon General of the U. S. Public Health Service in Washington, D. C., assumed that office as of December 1, 1983, to become the 5th president of the Medical College of Georgia. It was a post for which Dr. Lois Ellison also was being considered. Would she have wanted the job?

"Yes," she answers the question without hesitancy. "I would have liked it."

But with her characteristic goodwill and cooperation with anything that is best for her school, she quickly adds with a smile: "We'll do just fine. He will make an excellent president."

Dr. Ellison is interested in the history of medicine and the part the Medical College of Georgia has played in the past. She and her husband have collected several original writings of former faculty members who taught at the school during its early days and old photographs showing scenes from the 1800s.

Following the recent interview that extended well into the afternoon, Dr. Ellison accompanied her visitor back down to the parking lot, chatting all the while about the past and future of MCG. At the outside landing, the popular physician, physician's wife, mother of 5, and grandmother of one, said a cheery goodbye and was off to grab a racquet and don appropriate attire to participate in a fast game of tennis.

Clinical Note

Changing Concepts: Treating Preinvasive Cervical Neoplasia

by Earnest M. Curtis, M.D.*

Three apparently unrelated developments have prompted a new approach to the management of neoplasia of the uterine cervix.

The threat of invasive disease would seem to have receded with the widespread use of Papanicalaou screening. In reality, cervical neoplasia has increased in frequency and has become a disease of young women.[1] The traditional emphasis on hysterectomy or excisional conization must give way to methods which preserve child-bearing potential.

A search for the etiology of cervical dysplasia, carcinoma-in-situ, and invasive disease has shifted over the past several decades. Sociologic facts, such as early marriage, sexual habits, and chemical environment, were overshadowed by the possibility of a viral origin. Almost a decade of effort has as yet failed to conclusively identify herpes simplex virus as the cause of cervical neoplasia.

Far more impressive is the evidence that the human papilloma virus is a principal etiologic agent.[2] This is the most common cause of abnormal Pap smears. The cellular changes in the epithelium of the cervix brought on by this wart virus are very similar to, and sometimes indistinguishable from, neoplastic changes. In one study of uteri removed from patients with carcinoma-in-situ, papilloma virus was identified within the specimen in 88%.[3] Among those with invasive cancer, the virus was found in an amazing 95% and among matched neoplasm-free control specimens in only 12%.

Every physician of young women is aware of the increase in venereal warts. A recent publication from the Centers for Disease Control in Atlanta noted a rise in office visits for condylomata from 169,000 nationally in 1966 to over 940,000 in 1981 and, by their estimate, the actual number is several times that.[4]

Far more impressive is the evidence that the human papilloma virus is a principal etiologic agent.[2]

Most preinvasive cervical neoplastic disease, whether mild, moderate, or severe, does not become invasive, but each grade has that potential. It is not possible to predict the outcome of any specific case. The cure rate is more related to size and depth of the lesion than to its histologic grade. Many authorities now agree that all forms should be treated the same.

Conservative therapy includes electro-cautery, cryo-therapy, excision and, more recently, carbon dioxide laser vaporization, and must be reserved for those patients available for follow-up. Others might best be treated with sharp conization or hysterectomy.

The extent of tissue destruction by heat and freezing is difficult or impossible to judge by most techniques.

Laser energy, when directed under colposcopic magnification may be exactly applied with very little damage to adjacent normal tissue. The resulting reduction in operative complications and effect on future pregnancies make this especially applicable in young women.[5] The savings in cost, as compared to in-hospital sharp conization and hysterectomy, add to the appeal. Under well controlled circumstances, the CO_2 laser may be used either in the physician's office or in a hospital setting and often requires no anesthesia. An additional application is in the management of venereal warts resistant to other forms of treatment.

In summary, the increase of cervical intraepithelial neoplasia among young women is probably closely related to the increased frequency of human papilloma virus infection. Two technical developments, the colposcope and the carbon dioxide laser, when expertly applied, offer an excellent rate of cure with minimum effect on subsequent fertility and pregnancy.

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These data suggest that external pneumatic compression reduces the incidence of postoperative acute deep vein thrombophlebitis.

Intraoperative Thrombophlebitis Prophylaxis

THOMAS R. NOLAN, M.D., *Atlanta**

POSTOPERATIVE acute deep vein thrombophlebitis (DVT) of the lower extremity is a major health problem leading to a significant incidence of pulmonary embolism (PE) and death and also to chronic disability in hundreds of thousands of persons annually in the United States.[1] The entire scope of the problem is far greater and more complex than can be detailed here, but any reasonable effort to prevent the malady is worthwhile. Heparin or other anticoagulant therapy to forestall hypercoagulability can be successful but cannot be used in all cases because of the great hazard of postoperative bleeding, especially in orthopedic, neurosurgical, and urologic operations.[2-4]

Salzman,[3] Skillman,[4] Coe,[2] Niccolaides,[5] Turpie[7] and their co-workers have explored the value of intermittent external pneumatic compression (EPC) of part or most of the lower extremity during and for several days after operations as prophylaxis and have noted significant beneficial results. In fact, Salzman[3] has noted comparable prophylactic value when EPC was used only during the operation and in the recovery room. Based on that experience, and reasoning that the period of muscle paralysis during operation is the critical time, the procedure described here was established at this hospital and offered to all surgeons.

Materials and Methods

The compression device used was the Athrombic™ Pump and calf compression leggings manufactured by Jobst Institute, Toledo, Ohio. The leggings were applied to the patients' legs prior to induction of anesthesia, with compression begun afterward and removed when the patient was transferred to the recovery room. Intermittent compression was continued in the interval until the leggings were removed.

A record was kept of all patients who were treated in this manner during the stated period, and follow-up information obtained by examining hospital and/or office records or by contacting the attending surgeon by written request for information. All patients of the author, most of his partners' patients, and selected patients of many other surgeons were included. There was no control group. The presence of edema and/or thigh or calf pain was considered evidence of deep thrombophlebitis for this study, even if the patient did not receive anticoagulation. A diagnosis of thrombophlebitis in a follow-up communication from the attending surgeon was also accepted.

Results

The records of 220 patients who were treated intraoperatively by EPC of the calves during the interval of January 1, 1981, through July 7, 1982, were examined. Most types of major noncardiac surgery were represented, with general and vascular surgery in the majority. The records of three patients were excluded because they received "mini Heparin" therapy as well as EPC, and six others were excluded because their surgery was within 9 days or less. None of these patients had clinical evidence of thrombophlebitis or PE. Follow-up of the 211 patients was 2 weeks to 18 months (Table 1).

Of the 211 determinate patients, only one had any evidence of pain, edema, or tenderness.[1] This patient, as described by the attending neurosurgeon,

* Dr. Nolan practices general surgery. Send reprint requests to him at South Fulton Hospital, 1170 Cleveland Ave., Atlanta, GA 30344.

TABLE 1 — Follow-up of Patients Treated Intraoperatively By External Pneumatic Compression (EPC)

Total Patients		220
Excluded Patients		
Received Heparin	3	
Inadequate Follow-up	6	
		9
Determinate Patients		211

had minimal superficial localized pain and tenderness at home, interpreted as superficial phlebitis which responded rapidly to rest and phenylbutazone. There was no evidence of DVT or PE. None of the remaining patients had any evidence of DVT or PE (Table 2).

TABLE 2 — Results of External Pneumatic Compression (EPC) on 211 Patients

Determinate patients		211
Deep vein thrombosis	0	
Superficial phlebitis	1	
Complications	0	

Discussion

These results compare favorably with other reported studies (Table 3).[2-5, 7] Statistical data were not calculated, since they were not considered appropriate for this kind of study, but the very low incidence of morbidity is considered noteworthy.

TABLE 3 — Efficacy of External Pneumatic Compression (EPC)

Author	*Date*	*No. Patients*	*Incidence DVT (%)* *Control*	*EPC*
Coe	1978	29	25	6
Skillman	1978	47	23	6
Nicolaides	1980	166	—	2.4
Saltzman	1980	50 Short term	25	6
		50 Long term	25	10

One defect of this study is that the end point is negative rather than positive, and no precise studies were performed to lead to that negative finding. The fact that this is a completely clinical study in a community hospital, however, has its own value. Since these are the surroundings in which very large numbers of patients are treated, it is important to know what happens to these patients.

There is also no control group of untreated patients for comparison, since it is impossible to conduct that kind of study in a community hospital such as ours. Historic controls are available to some degree, but the author found it difficult to find incidence figures in studies under comparable circumstances. The incidence of postoperative DVT in patients with no effort at prophylaxis varies widely in reports of differing groups of patients.[6] It may be as high as 20% in patients with intracranial disease,[7] 25% or more in urologic patients,[2, 3] and 47% in some orthopedic patients[8] (Table 4). Many of these studies have used sophisticated procedures to detect postoperative thrombi, and our study is not comparable. In fact, clinical diagnosis may be only 50% accurate in detecting DVT,[9] and if so we have missed many. By the same token, however, only 50% of symptomatic patients thought to have DVT clinically are found to have the condition, and we have had no false positives. This report does not attempt to be highly precise but only to report experience. In broad terms, our experience thus far suggests that EPC is effective in reducing the incidence of DVT.

The fact that this is a completely clinical study in a community hospital . . . has its own value.

TABLE 4 — Incidence of Postoperative Deep Vein Thrombophlebitis In Untreated Patients

Author	*Year*	*No. Patients*	*Incidence %*
Breneman	1965	12,000,000	3.3
Sharnoff	1966	1,396	68
Castle	1970	73	29
Kakkar	1975	191	23
Skillman	1978	48	23
Coe	1978	24	25
Salzman	1980	10,904	3.5

The cost of using EPC was $50.65 per patient, or $10,687 for 211 patients. It has been calculated that the cost of Heparin therapy for acute DVT was $1,445.00 in 1979.[8] Without regard for mortality and morbidity risks and costs, and assuming a minimum untreated incidence of DVT at 3.5%,[8] preventing eight cases of DVT (3.5% × 211) is cost effective in relation to cost of therapy for EPC ($11,560 vs. $10,687).

The exact mechanism of benefit is not clearly defined. The simple mechanical effect of pumping to increase venous return is well documented, but there are also studies which indicate that the mechanical stimulus activates the local fibrinolytic system to the extent that a local as well as a detectable systemic effect are produced.[10] The interaction of these two mechanisms is apparently not clear.

Conclusion

These data suggest that EPC reduces the incidence of postoperative acute deep vein thrombophlebitis. It is also apparent that using EPC only during operation is as beneficial as using it for longer periods. This therapy appears to be significantly cost effective.

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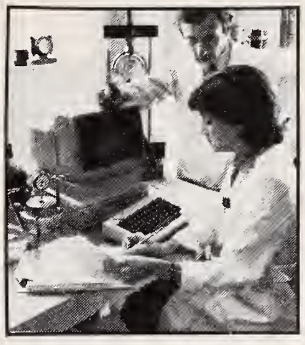
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While this modality does not cure cancer, it does promote increased patency of the airways and thus improves the quality of survival.

Laser Therapy of Tracheobronchial Lesions: History and Current Use

JOSEPH I. MILLER, M.D., *Atlanta**

THE SURGICAL LASER represents the fulfillment of one of man's oldest dreams of technology. A high intensity beam of light of a pure single color is used to produce a unique type of energy that is directed and focused into tissue. The absorbed laser energy can be used for vaporization or coagulation of tissue. Lasers have been used in many aspects of medicine including otolaryngology, neurosurgery, gynecologic surgery, urology, gastroenterology, ophthalmology, and thoracic surgery.

Historic Perspective

The term *laser* is an acronym for *L*ight *A*mplification by *S*timulated *E*mission of *R*adiation and describes the emission process by which this intense beam of electromagnetic radiation is generated. The original theory of this process was first suggested by Neils Bohr, who postulated that as an atom falls from a high to a low energy level, it emits a quantum of energy in the form of light or other electromagnetic radiation.

Albert Einstein expanded on Bohr's work in 1917 when he discussed the concept of stimulated emission.[1] From 1917 to 1950, work was concentrated on a satisfactory quantum theory, and the theory of stimulated emission was somewhat neglected. Except for the Nobel Laureate work of Townes and Basov in 1954[1] on the use of stimulated emission for microwave amplification, it was not until 1958 that Schawlow and Townes renewed interest in this concept.[2] In 1960, T. H. Maiman constructed the first laser in the United States using a rod of ruby.[3] The first argon laser was constructed in the early 1960s, with the carbon dioxide laser being used in 1970 and the neodymium laser in 1979.

Background

Atoms and molecules exist at low and high energy levels. Those at low energy levels can be excited to higher levels by exposure to energy of appropriate frequency. On returning to a lower level of energy, they emit a quantity of energy (photon) in the form of light or other electromagnetic radiation. Transitions between the various atomic energy levels may take place not only spontaneously but also as the result of stimulation of excited systems by photons of an appropriate frequency. Stimulated emission, which is the basis of laser operation, occurs when excited atoms are bombarded with photons, raising the atoms to a more excited state and resulting in the release of photons and a return of the atoms to a lower energy level.[1] These photons have three special qualities: (1) *coherence* — all waves are in phase in both space and time; (2) *collimation* — all waves are parallel; and (3) *monochromaticity* — all waves have exactly the same wave length.[1]

A laser consists of a tube or resonance cavity with a mirror at each end. At one end is a totally reflective mirror, while the opposite mirror is not only reflective but also partially transmissive for a specific light wave length. A source of electrons, or medium, is contained within the tube. Atoms within the medium are raised to an excited state by an outside source of energy, usually an electric current. As more and more atoms reach an excited state, photons are emitted. Those that travel in an axis parallel to the resonance cavity are reflected from the mirrors. The reflected photons cause more atoms to be in the

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excited state, releasing more photons. This increase in photon release is called the photon cascade. Finally, a shutter opens at the end of the tube to allow the coherent, monochromatic laser light to pass through the partially transmitting mirror.

Biologic Effects of Lasers

The biologic effects of all types of surgical lasers depend on the extent of tissue absorption, destruction, and vaporization. Many laser systems have been developed with a spectrum of wave length ranging from the near ultraviolet to the far infrared regions. For medical applications, the transformation of light energy into heat energy occurs in the tissue, resulting in photo-coagulation necrosis (denaturation of proteins, dehydration, carbonization, and vaporization). Tissue destruction and vaporization depend upon the absorption and reflection of the laser beam within the tissue, the power density of the beam, the duration of tissue exposure, the degree of tissue tension, and the tissue vascular volume. Thus, the laser may cause hemostasis, coagulation, cutting, or vaporization as the light energy is transferred to tissue and converts to thermal energy.

Power density (PD) is defined as the concentration of power (watts) per unit area (sq cm) and is a function of the power setting, the focal length, and the spot size of the laser system used. To determine power density, the following equation may be used:

$$PD = \frac{\text{Power (watts)}}{\pi \text{ (mm spot size)}^2 \times 400}$$

Radiant exposure (RE) is defined as the number of seconds (T) that the tissue is exposed to a laser at a specified power setting and may be expressed as:

$$RE = PD \times T.$$

Radiant exposure determines the amount of damage occurring in surrounding tissue as a result of heat conduction from the sides of the crater.

Laser Types and Applications

There are four types of lasers developed for medical applications: carbon dioxide, neodymium yttrium-aluminum-garnet (Nd:YAG), argon, and ruby. The lasers are named according to the material used for the laser medium and are classified by output power and wave length. Table 1 summarizes the individual characteristics of three of the four types, excluding the ruby laser due to its infrequent usage.

TABLE 1 — Laser Characteristics[11]

Laser Material	*Carbon Dioxide*	*Argon*	*Nd:YAG*
Wave length (nm)	10,600	500	1060
Transmission system	mirrors	fiberoptic	fiberoptic
Absorption in tissue	high	selective	low
Coagulation effects	low	medium	high
Cutting effect	high	low	low
Power output (watts)	100	4	100

Carbon dioxide and Nd:YAG lasers are used primarily in the treatment of tracheobronchial lesions. The carbon dioxide laser uses a mixture of carbon dioxide, nitrogen, and helium as the lasing medium and can be used to cut or coagulate. The Nd:YAG laser uses a single crystal of yttrium-aluminum-garnet and is predominantly used for coagulation and vaporization through fiberoptic instruments. Argon lasers employ argon gas, can be used only in the coagulation mode, and are predominantly used in ophthalmic surgery.

Laser Applications and Potential Complications in Bronchology

Indications for laser use in tracheobronchial lesions are found in Table 2. Papillomas and fibromas

TABLE 2 — Lasers in Bronchoscopy

Indications
1. Benign tracheal lesions
a. Papillomas
b. Fibromas
c. Chondromas
d. Polyps
e. Granulomas
f. Stenosis
2. Malignant tracheobronchial lesions
a. Primary
b. Metastatic
3. Hemorrhage

have been the most common benign indications; however, the majority of experience reported in the literature is in the treatment of unresectable, obstructing, tracheobronchial neoplasms that have failed to respond to chemotherapy and/or radiation therapy.

Cortese et al[4] noted the following criteria for laser use: (1) malignant, airway obstructing lesions that have failed to respond to any other reasonable form of therapy; (2) lesions protruding from the bronchial wall; (3) a lesion of less than 4 cm in axial length; (4) functioning lung tissue beyond the obstruction; and (5) visible bronchial lumen.

The application of CO_2 and Nd:YAG laser technology in the treatment of tracheobronchial lesions has added an exciting dimension to bronchology. Use of the CO_2 laser system through the ventilation rigid bronchoscope was first introduced in 1973.[5] This system operates in the invisible infrared spectrum at 10.6 microns and generates a thermal beam that is nearly totally absorbed by the tissues. Resulting instantaneous tissue destruction produces minimal edema, bleeding, and scar formation; however, this system necessitates the use of a rigid bronchoscope and requires general anesthesia. For these reasons, the Nd:YAG laser was developed for use through the flexible fiberoptic bronchoscope.

Carbon dioxide and Nd:YAG lasers are used primarily in the treatment of tracheobronchial lesions.

The Nd:YAG laser was introduced in Europe in the late 1970s to deliver radiation with a wave length of 1064 microns suitable for conduction by a quartz fiber and thus for use through the flexible fiberoptic bronchoscope.[6] This wave length is poorly absorbed by hemoglobin and causes significant penetration of tissue; however, the scatter effect of this type of laser must be considered when the laser beam is used near the bronchial wall or in the right upper or left upper lobe.

Potential complications with laser therapy include bleeding, bronchial wall damage, endobronchial fire, fistula, and respiratory distress, with bleeding and endobronchial fires reported most often. Familiarity with endobronchial anatomy in relation to major pulmonary vasculature can greatly reduce the chance for major bleeding. The potential for fire and combustion can be reduced by keeping the F_IO_2 at less than 0.5, wrapping the red rubber endotracheal tube with aluminum tape, or utilizing specially designed laser endotracheal tubes and limiting the power wattage to 40 and the pulse width to 0.5 milliseconds in short, continuous bursts of 5 to 15 seconds. Carbonization of particulate matter with the CO_2 laser can cause false bursts of light that resemble flash fires; however, experience with laser physics enables the surgeon to discern the difference.

It should also be noted that particular attention to detail in the laser operating suite decreases the risk to both patient and operating room personnel. The laser suite should be clearly identified by appropriate signs indicating that a laser is in use, and all individuals must use protective eye wear to prevent damage to the retina from the laser beam.

Surgical Management and Technique

A management protocol for all patients undergoing laser endoscopy of the tracheobronchial tree may be found in Table 3. The computerized axial tomography (CAT) scan with coronal reconstruction is extremely helpful in lesion evaluation; however, if a CAT scanner is not available, tracheal tomograms can provide an excellent guide to the lesion anatomy.

TABLE 3 — Management Protocol

1. Complete history and physical exam
2. Pulmonary function tests
3. Arterial blood gas analysis
4. CAT scan with coronal reconstruction
5. Tracheal tomograms
6. Coagulation profile
7. Type and crossmatch blood

Operative management of a high-grade, obstructing lesion of the tracheobronchial tree requires close cooperation between the anesthesiologist and the surgeon. Fiberoptic bronchoscopy under local anesthesia is performed on all patients to determine suitability of the lesion for laser therapy. Once this has been accomplished, one of three anesthetic techniques may be used with the laser therapy, preferably under general anesthesia. When using the carbon dioxide laser, a #8 Wolfe laser bronchoscope is passed beside a #5 indwelling laser endotracheal tube. With the Nd:YAG laser, the Olympus fiberoptic laser bronchoscope (Olympus Optical Co., Ltd., Atlanta, GA) is passed through a rigid ventilating

bronchoscope. Finally, intravenous general anesthesia with spontaneous ventilation may be used, as described by Brutinel et al.[7] All patients are monitored with frequent arterial blood gases and ear oximetry. Once the base of the lesion has been lasered, it is helpful to remove some of the material with biopsy forceps. Following completion of laser endoscopy, a repeat fiberoptic bronchoscopy is performed to assess the results.

The biologic effects of all types of surgical lasers depend on the extent of tissue absorption, destruction, and vaporization.

Our initial experience with laser bronchoscopy consisted of one case of benign recurrent obstructing adenomatous polyp and 19 cases of greater than 70% obstruction of the tracheobronchial tree by neoplasms refractory to standard modalities of therapy. Twenty-seven procedures were performed on these 20 patients without complications. The average hospital stay was 3 days, the longest stay being 7 days when two procedures were performed. Results were considered excellent and quite dramatic in 17 patients (relief of all endobronchial obstruction) and good in two patients (partial relief of obstruction). In the one remaining patient, an unsuccessful attempt was made to open a main stem bronchus that had little functioning distal lung tissue.

Discussion

A review of the literature presents a wide range of success with laser therapy in a number of bronchologic problems. In 1970, Polanyi et al.[8] described the first clinical use of carbon dioxide laser therapy in tracheobronchial lesions. McElvin and Zorn[9] provide the most complete report to date on the use of the CO_2 laser in bronchology. They discuss 43 patients treated between 1979 and 1983 who underwent from one to three laser treatments under general anesthesia and report good results in 39 patients; however, four patients died in the immediate postoperative period.

Numerous authors have described experience with the neodymium:YAG laser in bronchology. Toty et al.[10] presented 164 patients, 84 of whom had malignant lesions, who had favorable response to this type of laser therapy. Dumond[11] reports greater than 1000 laser sessions on 527 patients: 331 patients with tracheobronchial tumor, 111 with tracheal stenosis, and 85 with miscellaneous conditions. He found the most common sites of involvement were the trachea and main stem bronchi and reported good results to Nd:YAG therapy in 95% and 92.8%, respectively, with an average survival of 18 months. Unger[11] reported similar results, while Wolfe[12] reported eight of 17 patients in whom hemoptysis was the primary indication for laser therapy (personal communication). Dougherty[13, 14] and Hayatha[15] present an extension of laser therapy to hematoporphyrin-sensitive tumors. Patients with documented endobronchial malignancy received hematoporphyrin, which was found to concentrate in the malignant tumor; laser stimulation destroyed the tumor containing hematoporphyrin pigment.

Limited experience with successful laser therapy for tracheobronchial lesions offers encouragement, particularly for the treatment of papillomatosis and malignant lesions with high-grade airway obstruction. While this modality does not cure cancer, it does promote increased patency of the airways and thus improves the quality of survival. We must remember the words of Paul Tournier that the goals of the physician in the treatment of this disease are to cure sometimes, to help often, and to comfort always.

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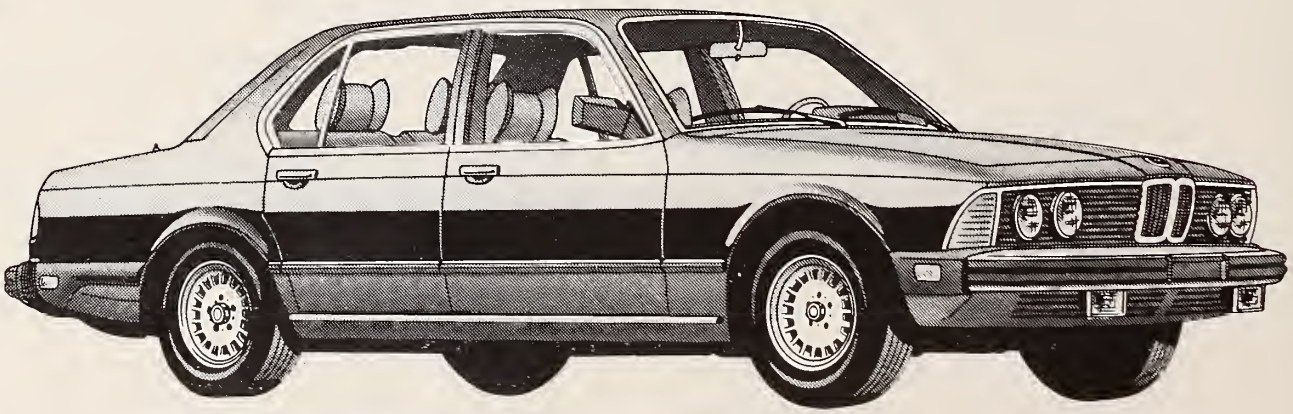
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Questions You May Have Been Afraid To Ask — And Some Intrepid Answers

Q. What is GaMPAC?
A. It is the Georgia Medical Political Action Committee, a voluntary, non-profit, unincorporated committee of individual physicians, spouses, and others and is not affiliated with any political party. The committee is an independent, autonomous organization — not a branch or subsidiary of any other political action committee.
Q. Did we miss the boat on GaMPAC?
A. Yes, definitely.
Q. Is it too late?
A. No, it is never too late.
Q. What are the purposes of GaMPAC?
A. (1) To promote and strive for the improvement of government and to stimulate physicians, spouses, and others to take a more active and effective part in governmental affairs. *(My interpretation . . . To elect our friends and to beat hell out of, I mean, defeat, our enemies at the polls!)*
(2) To encourage physicians, spouses, and others to understand the nature and action of their government as to important political issues and as to the records, officeholders, and candidates for elective office. *(My interpretation . . . To know what's going on and to express your views to the electorate — if you don't know what's going on, find out by reading "The Legislative Bulletin" by Dr. Jim Kaufmann and Rusty Kidd.)*
(3) To assist physicians and others in organizing themselves for more effective political action and in carrying out their civic responsibilities. *(My interpretation . . . Get the lead out and get with the political program!)*
(4) To do any and all things necessary or desirable for the attainment of the purposes stated above. *(My interpretation . . . Join GaMPAC today — then put your mouth where your money is!)*
Q. What do we expect of a public official?
A. Listen to all sides of the issue, including our side, and then vote or act responsibly according to the facts.
Q. Is GaMPAC effective?
A. Yes, we are so effective that our enemies wish to outlaw PACs.
Q. What if we had not missed the boat on GaMPAC and AMPAC?
A. All physicians and their spouses would be members.
We would influence all elections and therefore indirectly all legislation.
Jim Sammons would be President of the United States.
One of us would be Attorney General.
Nuisance malpractice claims would cease to exist.
The national debt would be decreased.
Medicine could be practiced for the benefit of the patient.

Q. Is it too late to join GaMPAC?
A. If we join today, we can increase our strength and have a good financial base — money in the bank — for the election of 1986.
Q. Are we successful in electing candidates?
A. Yes. Approximately 91% of the candidates supported by GaMPAC in the last election were elected.
Q. What is AMPAC?
A. It is the American Political Action Committee of the 50 state PACs and is very influential nationally.
Q. Can GaMPAC lobby for legislation?
A. No, we cannot lobby but we can elect the right candidates. By doing this, we will obviously get good legislation.
Q. Is GaMPAC a Special Interest Group?
A. Yes. We have a special interest in caring for our patients.
Q. Are you a member of GaMPAC-AMPAC?
A. Yes — since 1961.

Earnest C. Atkins, M.D.
Surgeon, Atlanta
Past President, MAG

Surgical Residency Papers Wanted — Reward Offered

PHYSICIANS TODAY have many methods of learning and preparing themselves for the future. This is necessary, for the modus operandi of the practice of medicine seems to be shifting, at times rapidly. There are, however, basic facts that must be mastered. These should be obtained in the undergraduate and graduate years.

When physicians advance to the postgraduate or "residency" level, they really begin correlating their previously learned data and combine this with their observations and experience with the patient's problems, laboratory findings, clinical course, and research. The advancement of knowledge for all depends upon this process.

We, as Georgians, are all aware of the confusion caused by the delay of Dr. Crawford W. Long in recording his observations and experience with the use of ether as an anesthetic.

With all of this in mind and with the emphasis now being placed by medical educators upon "scholarly activities," we need a relatively available place for our surgical residents to publish papers in order to encourage them to record more of their clinical and research activities. This will also help keep those of us who have been out of medical school for some time abreast of the present knowledge being accumulated in our surgical residency programs.

I believe the *Journal of the Medical Association of Georgia* is the place for us to begin. We all should encourage the surgical resident staff to prepare papers and submit them to the MAG *Journal*. It will be rewarding to all concerned.

Milford B. Hatcher, M.D.
Chairman-Professor
Department of Surgery
Mercer University School of Medicine
Macon

Editor's Note: Dr. Hatcher is to be commended for his efforts to stimulate publication of high quality surgical residency papers in the Journal. *As part of this endeavor, he has generously offered prize money in the amount of $250 to be awarded annually for the best paper written by a surgical resident in an accredited program in the state of Georgia. Perhaps other medical residency programs will be stimulated as well to contribute superior papers to the* Journal.

Issues and Answers Under the Gold Dome

Tort reform! Professional liability! Increasing insurance premiums! Increased medical costs!

Yes, your professional liability insurance premiums are escalating, which, yes, does increase the overall costs of medical care.

One of the principal goals of MAG is to assist in assuring the highest quality of medical care and to maintain this quality within reasonable costs. In the mid 1970s, the MAG asked the Georgia General Assembly to address the problem of escalating premiums. This they did but only after literally hundreds and hundreds of M.D.s from around the state repeatedly contacted their state representative and state senator, informing them of the problem and asking their support of the issues pending. Three of the four issues asked for in 1975-76 passed.

Now, 1985 is the time to respond again. The MAG, MAG Mutual, Defense Attorney Association, business coalitions, cost containment advocates, and Governor's Council on Medical Malpractice are all seeking changes in the law.

As in 1975, however, only *YOU* can make our proposals enacted into law. *Contact your state representative and state senator!* Personally visit them, call them, write them, *participate in the MAG PIP (Physician Involvement Program).* Become an advocate for yourself, your profession, and most important of all, your patients. Some of the tort reform issues to be presented are:

Statute of Limitations for Minors

To establish, by statute, that persons age six (6) and older would have two (2) years from occurrence of an injury or illness to file suit (same as current law for persons 18 and older). For persons under age six (6), they would have until their sixth (6th) birthday plus two (2) years to file suit.

Dismissal and Refiling

Legislation will be introduced to state that after a specific time during a trial, the plaintiff has waived his or her right to dismiss the case. This legislation would also state that the plaintiff could only dismiss the case once without prejudice. Current law permits the plaintiff to dismiss a case three times, anytime up to the point the verdict is read, and have it re-tried!

Structured Settlements and Sealed Settlements

A resolution will be introduced asking all judges to encourage settlements to be both structured and paid out over a period of time, and that all awards be sealed, not for public dissemination.

Consolidation of Related Causes of Action; Division of Jury Awards

Limitation on Punitive Damages and Other Awards

In your weekly *Legislative Bulletin,* one tort reform issue will be highlighted and explained thoroughly.

If this is not enough to enable you to recognize the importance of your personal involvement, perhaps one or more of these additional issues will: *Physical Therapy Expansion Act; Respiratory Therapy — Licensure/Certification; X-Ray Technicians — Licensure/Certification; Clinical Lab Technicians — Licensure; Plastic Surgery — Board Certified Requirement; Indigent Care; Child Abuse; Certificate of Need; Motorcycle Helmet Law — Repeal; Chiropractic — Expand Scope of Practice; Seat Belts; Generic Drug Law — M.D. Exempt; Insect Sting; and DHR — Funding.*

James A. Kaufmann, M.D.
Chairman, MAG Council
on Legislation

cancer page
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Mohs' Surgery for Removal of Skin Carcinomas

PETER C. SUHGE D'AUBERMONT, M.D., and
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THE WORD "CANCER" is frightening to everyone. Unfortunately, as physicians, we do not give skin cancers, except for melanomas, the respect that they deserve. This indifferent attitude stems partly from the fact that approximately 95% of basal and squamous cell carcinomas can be initially cured by any one of several different treatment methods. These include: surgical excision with primary closure or reconstruction, electrodessication and curettage, cryosurgery, and radiation therapy. However, occasionally basal or squamous cell carcinomas may recur, sometimes many times, because of incomplete removal or destruction.

Mohs' surgery is an alternative technique for total removal of problem skin cancers. It requires both serial excision of tissue and preparation of *special* frozen sections for microscopic examination. It is, therefore, both a surgical as well as a pathologic technique. The same physician acts as both surgeon and pathologist.

Mohs' surgery was developed over 40 years ago by Dr. Frederic Mohs, now professor of surgery at the University of Wisconsin.[1] The technique involves the following:

1. The area of the tumor is anesthetized using a local anesthetic.
2. A map is drawn that corresponds exactly to the patient's lesion.
3. The tumor mass is debulked with a curette.
4. A thin layer of tissue encompassing the tumor area is excised.
5. The excised tissue is sectioned and each section assigned a number which is indicated on the map already drawn.
6. *Two edges* of each section are color-coded with different color dyes.
7. Frozen sections are then performed on the total undersurface of each section, including the peripheral epidermis if present.
8. Wherever tumor is found under the microscope, it is marked on the corresponding section indicated on the map.
9. Because the map corresponds exactly to the patient's lesion, one can go back to the patient and in the particular area where the skin cancer was found on the section under the microscope, another thin layer of tissue is removed. Steps 5-7 are then carried out again.

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Prepared at the request of the Georgia Division, American Cancer Society. Others wishing to contribute papers to this Page are invited to send them to T. Gray Fountain, MD, Cancer Page Editor, 910 N. Jefferson, Albany, GA 31708.

The whole procedure is repeated as many times as is necessary, until no residual tumor is detected; that is, a tumor-free plane has been reached.

Mohs' surgery offers a cure rate of 99% on all primary basal cell carcinomas, including those occurring in areas prone to recurrence by more conventional treatment methods. The high recurrence areas include the inner and outer canthi of the eye, external ear (especially ear canal and postauricular sulcus) and the nasolabial folds. These areas represent embryonic fusion planes, and tumor can penetrate very deeply with minimum resistance. Recurrent carcinomas of the skin should also be treated with Mohs' surgery, because it offers the highest cure rate, approximately 95%, while the cure rate by any other modality is only about 50-70%.[2]

Mohs' surgery offers a cure rate of 99% on all primary basal cell carcinomas, including those occurring in areas prone to recurrence.

The high cure rates that are achieved from Mohs' surgery stem from the different way in which frozen sections are performed compared to more traditional methods. Conventionally, frozen sections from the operating room are cut vertically at random through a block of tissue, and tumor extensions laterally or deeply may be missed if the section is not cut through an area containing tumor. On the other hand, the frozen sections that are done with Mohs' surgery cut the tissue obliquely. These oblique sections cut through the whole undersurface of the tissue, so that tumor extensions laterally or deeply cannot be missed.[3] The techniques of removal of tissue and preparation of microscopic sections used with Mohs' surgery require special training. Usually such training is undertaken by a dermatologist who has already received extensive training in dermatopathology during the course of his or her dermatology residency.

The advantages of Mohs' surgery, in addition to the high cure rates, include maximal preservation of normal, healthy tissue as well as relative cost effectiveness. The surgery is most commonly performed in an out-patient setting under local anesthesia, and the cost of the pathology is built into the overall cost of the procedure.[4]

Disadvantages of Mohs' surgery would include the fact that the procedure may be quite time consuming for both physician and patient. However, this is a small price to pay for the greater assurance of total removal of tumor.

Two further objections that many physicians had previously held concerning Mohs' surgery were: 1) the procedure was painful, and 2) most of the wounds were allowed to heal by secondary intention, resulting in marked facial deformity. The pain was a result of a chemical fixative which is no longer used in most cases, and was the origin of the older term "chemosurgery." This term has now been replaced by Mohs' surgery or the more cumbersome "microscopically-controlled surgery."

Although some wounds after removal are allowed to heal by granulation and epithelization, many are repaired immediately by skin grafts, skin flaps, or primary

closure. Usually these repairs may be done, if possible, within a week and frequently in conjunction with a plastic surgeon, head and neck surgeon, or surgical oncologist. However, we would stress that total removal of the skin cancer is the primary goal of the treating physician and that cosmetic repair is of secondary importance. The Mohs' surgeon can be quite helpful in advising patients and/or physicians regarding immediate reconstruction, as some tumors appear under the microscope to be much more aggressive than others. In such cases, it may be wisest to delay reconstruction for some time (1-2 years) so that the patient may be observed for any evidence of recurrence.

To summarize then, indications for Mohs' surgery are:

1. All recurrent basal and squamous cell carcinomas.
2. All primary lesions that occur in the high recurrence areas; that is, the inner and outer canthi of the eye, external ear (especially the ear canal and postauricular sulcus), and nasolabial folds.
3. For all primary lesions in which it is extremely important to preserve function and in areas where the cosmetic appearance is important also, for example, nose, fingers, penis.

Removal of skin cancers, particularly in cosmetically visible areas such as the face, is emotionally trying for patients. Therefore, physicians should make as certain as possible that these cancers are totally removed or treated, so that multiple recurrent skin cancers are a thing of the past. Mohs' surgery is an alternative form of therapy which may offer the best chance for total removal of skin cancers in selected cases.

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The Scope of Chiropractic Practice: Limits Reaffirmed

WILLIAM B. KEISLER, *Atlanta**

RECENTLY, Michael J. Bowers, Attorney General of the State of Georgia, issued an official opinion reaffirming certain limitations imposed by the law of the State of Georgia on the practice of chiropractic (the "Opinion").[1] The Opinion was given in response to an inquiry from William G. Miller, Jr., the Joint-Secretary of the State Examining Boards,[2] who requested that the Attorney General consider whether or not the Chiropractic Practice Act, as amended (the "Chiropractic Act"), authorizes chiropractors to engage in or perform certain specified practices or procedures. This month's Legal Page discusses the Attorney General's analysis of this issue.[3]

Background

"To practice medicine" is defined under Georgia law as:

> *to hold one's self out to the public as being engaged in the diagnosis or treatment of disease, defects or injuries of human beings; or the suggestion, recommendation or prescribing of any form of treatment for the intended palliation, relief or cure of any physical, mental, or functional ailment or defect of any person with the intention of receiving therefor, either directly or indirectly, any fee, gift, or compensation whatsoever; or the maintenance of an office for the reception, examination, and treatment of persons suffering from disease, defect, or injury of body or mind; or attaching the title "M.D.," "Oph.," "D.," "Dop.," "Surgeon," "Doctor," "D.O.," "Doctor of Osteopathy," either alone or in connection with other words, or any other words or abbreviations to one's name indicating that such person is engaged in the treatment or diagnosis of disease, defects or injuries to human beings, . . . O.C.G.A. " 43-34-20.*

Subject to certain exemptions, Georgia law prohibits any person not licensed by the Composite State Board of Medical Examiners from practicing medicine (as defined above) in the State of Georgia.[4] One such exemption from this prohibition is made for licensed chiropractors, who are permitted to engage in activities that fall within the scope of the practice of chiropractic (as defined in the Chiropractic Act), even though some of those activities might also fall within the statutory definition of the practice of medicine.

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For over 50 years prior to 1977, the definition of "chiropractic" under Georgia law was and remained

> *adjustment of the articulation of the human body, including ilium, sacrum and coccyx, and electricity in the use of X-ray photograph* [sic], *but the X-Ray shall not be used for therapeutical means.*[5]

In 1977, the General Assembly amended the Chiropractic Act to expand the definition of chiropractic by adding the following language:

> *The term "chiropractic" as used in this Chapter also shall mean that separate and distinct branch of the healing arts whose science and art utilizes the inherent recuperative powers of the body and the relationship between the musculoskeletal structures and functions of the body, particularly of the spinal column and the nervous system, in the restoration and maintenance of health. Chiropractic is a learned profession which teaches that the relationship between structure and function in the human body is a significant health factor and that such relationships between the spinal column and the nervous system are the most significant, since the normal transmission and expression of nerve energy are essential to the restoration and maintenance of health. Provided, however, "chiropractic" as used in the Chapter shall not mean or allow the use of drugs or surgery. A licensed practitioner of chiropractic may only use the title "chiropractor," or "Doctor of Chiropractic," or "D.C."*[6]

In 1978, the General Assembly again amended the Chiropractic Act by imposing a new chiropractic licensure requirement of graduation from a chiropractic college that satisfies the Standards of the Council on Chiropractic Education.[7]

The Opinion firmly rejects that idea with the observation that the practice of chiropractic is subject to the control of the legislature, not of the Council on Chiropractic Education.

In 1982, the General Assembly appeared to expand the scope of practice of chiropractors by explicitly authorizing licensed chiropractors to

> *have the right to sign health certificates, reporting to the proper health officers the same as other practitioners.*[8]

Otherwise, the scope of practice of chiropractors has been and remains that licensed chiropractors

> *have the right to adjust patients according to specific chiropractic methods. Chiropractors shall observe public health regulations. Chiropractors shall not prescribe or administer medicine to patients, perform surgery or practice obstetrics or osteopathy. A licensed practitioner of chiropractic may use only the title "chiropractor" or "doctor of chiropractic" or "D.C."*[9]

Joint-Secretary's Inquiry

The inquiry of the Joint-Secretary focused upon whether under the Chiropractic Act chiropractors licensed in Georgia are legally authorized to undertake:

(1) Procedures which introduce electrical current or the immediate by-product of electrical current into the body, such as ultrasound, galvanism, microwave, diathermy, and electro-muscle stimulation;

(2) Procedures in which the equipment utilizes electrical current; however, the electrical current or its immediate by-product is not introduced into the body, such as intermittent traction, intersegmental traction, and vibrators;

(3) Procedures utilized for analytical, therapeutic, and diagnostic purposes which puncture the skin, such as venipuncture, capillary puncture, and acupuncture;

(4) Procedures for analytical, therapeutic, or diagnostic purposes, such as colon lavage, barium enema, and colonic irrigation; or

(5) The prescribing or dispensing of nutritional supplements, such as vitamins or minerals.

Attorney General's Opinion

The Opinion first analyzes the recent changes in the Chiropractic Act and concludes that these changes did *not* have the effect of expanding the scope of chiropractic practice. The expanded definition of chiropractic as adopted in 1977 does not, according to the Opinion, have the effect of expanding the procedures or practices which chiropractors are legally authorized to perform. Instead, the Opinion views the key point in this statutory change to be the declaration that chiropractic is a learned profession. As such, the practice of chiropractic is "affected with the public interest and subject to regulation by the State under its police powers for the protection of the public."

The Opinion also addresses the new chiropractic licensure requirement of graduation from a chiropractic college approved by the Council on Chiropractic Education (the "CCE") or a chiropractic college having equivalent standards. The Opinion concludes that although the CCE requires approved institutions to teach certain procedures, such curriculum requirements are not binding on the General Assembly, which, in its regulation of chiropractic practice, clearly has the power to prohibit chiropractors from practicing such procedures.

Thus, for example, if the CCE requires approved chiropractic colleges to teach students how to draw blood samples, it might be inferred that the General Assembly, by adopting the licensure requirement of graduation from a CCE-approved school, implicitly adopted or accepted the idea that, since licensed chiropractors are required to be trained to draw blood samples, the scope of chiropractic practice should permit them to do so. The Opinion firmly rejects that idea with the observation that the practice of chiropractic is subject to the control of the legislature, not of the CCE. Taking this line of reasoning one step further than the Opinion goes, it appears that the Attorney General's position is that the General Assembly has the power both to require applicants for licensure as chiropractors to be trained to draw blood (or to perform other procedures) and to prohibit licensed chiropractors from engaging in those same procedures.

. . . the Attorney General concluded that the scope of chiropractic practice has* not *been expanded beyond the limited authorization of chiropractors to make adjustments. . . .

Based on the considerations set forth above, the Opinion analyzes each of the five specific procedures and practices about which the Joint-Secretary inquired. The test, according to the Opinion, for whether a procedure or practice is authorized to be practiced by chiropractors under the Chiropractic Act is (a) whether the procedure or practice is used to make an adjustment, *and* (b) if so, whether its use conforms with specific chiropractic methods.

The Opinion points out that all but one of the specific practices and procedures inquired about are *not* used to make adjustments. Rather, those practices and procedures are "used before and after the chiropractic adjustment" or "preparatory to and complimentary *[sic]* of the chiropractic adjustment," but not actually to make the adjustment. Accordingly, under the legal standard described above, the Attorney General found that those procedures (except for procedures involving the use of electrical devices — such as intermittent traction devices and vibrators —

actually to perform adjustments) fall outside the scope of authorized chiropractic practice.

In addition, the Attorney General recognized that the Chiropractic Act specifically prohibits chiropractors from practicing several of the five listed practices and procedures. For example, the use of X-rays for therapeutic purposes is specifically prohibited under the Chiropractic Act.[10] The practice of any surgical procedure by a chiropractor, interpreted in the Opinion to include any procedure that involves insertion of a needle into the skin of a person, is also specifically prohibited.[11] Finally, chiropractors are specifically prohibited from prescribing or administering medicines or using drugs, including most vitamins, minerals, and nutritional supplements.[12]

Conclusion

Notwithstanding the statutory changes in the Chiropractic Act over the past 7 years, the Attorney General concluded that the scope of chiropractic practice has *not* been expanded beyond the limited authorization of chiropractors to make adjustments in conformity with specific chiropractic methods and to use equipment, such as intermittent and intersegmental traction devices and vibrators, only for the purpose of making adjustments in conformity with specific chiropractic methods. In view of the strict interpretation of the Chiropractic Act adopted in the Opinion, it should be expected that chiropractors will continue their efforts in the General Assembly to obtain further amendments of the Chiropractic Act for the purpose of expanding the authorized scope of chiropractic practice.

Notes

1. Op. Atty. Gen. 84-53 (August 10, 1984).

2. The State Examining Boards consist of most Georgia state boards, commissions, and other agencies having authority to license, regulate, or control any profession, business, or trade, including in particular the Composite State Board of Medical Examiners (the licensing board for physicians) and the Georgia Board of Chiropractic Examiners (the licensing board for chiropractors). The Joint-Secretary is an individual appointed by the Georgia Secretary of State to act as secretary of the State Examining Boards and has responsibility for carrying out most administrative functions of the examining boards. O.C.G.A. 43-1-2. In addition, the Joint-Secretary has power to bring suit on behalf of the State for an injunction against any person engaging in the unlicensed practice of medicine, chiropractic, or any other profession required to be licensed by any of the State Examining Boards.

3. Opinions rendered by the Attorney General do not have the force of law and do not constitute binding precedent on courts of law (though such opinions may have some persuasive value when presented to a court). However, the Attorney General's opinions do represent the position of the State on the legal questions that they address, and as a practical matter, state agencies rarely choose to disregard opinions of the Attorney General or to act in violation of the interpretation of law expressed in Attorney General's opinions. Accordingly, it should be expected that both the Georgia Board of Chiropractic Examiners and the Composite State Board of Medical Examiners will abide by the Opinion, until the Opinion is overturned or superseded by further amendments of the Chiropractic Act, by a judgment of a court of competent jurisdiction, or by a subsequent Attorney General's opinion.

4. O.C.G.A. §43-34-26.

5. 1921 Ga. Laws, p. 166, 167.

6. 1977 Ga. Laws, p. 232.

7. 1978 Ga. Laws, p. 2050.

8. 1982 Ga. Laws, p. 3, 92. The Opinion does not specifically address the effect of the expansion of the scope of chiropractic practice to give chiropractors the "right to sign health certificates." Accordingly, we must assume that the Attorney General concluded that the right to sign health certificates does not affect the legal authorization of chiropractors licensed in Georgia to perform any of the specific procedures and practices addressed in the Opinion.

9. See O.C.G.A. §43-9-16.

10. O.C.G.A. §43-9-1(2).

11. O.C.G.A. §§43-9-1(2) and 43-9-16(c).

12. Id.

Diet and Cardiovascular Disease: The Morbid Connection

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"Vyry made Christmas a happy time. Innis killed the fat hog and they had two hundred pounds of fresh meat. Vyry made sausage and liver pudding and crackling bread, cooked chitterlings, and made souse from the hogs head and feet. They salted and sugar-cured with molasses the hams and shoulders and middlings. Vyry cooked so much tenderloin backbones, ribs, and neckbones that Innis declared, "we sho is had enough fresh meat."[1]

DEATH RATES from coronary heart disease in Georgia are among the highest in the nation. The prevalence of hypertension is also high, and national surveys reveal average blood pressures to be several mm Hg higher in the South than in other regions. There is abundant evidence that dietary factors contribute to the risk of cardiovascular disease. High sodium and saturated fat intake have been linked to hypertension, and high saturated fat intake contributes to high cholesterol levels. There is recent evidence that reduction of serum cholesterol levels by diet and drug therapy is associated with diminished risk of coronary heart disease. Dietary patterns must, therefore, be taken into account in an effort to prevent or treat cardiovascular disease.

The dietary patterns of the Georgia population today can be traced back to the early 1880s.

How did dietary patterns in Georgia develop? What factors have led to current practices in the selection and purchasing of foods? What changes have taken place? The eating habits of the Georgia population have been studied by nutritionists and anthropologists and answers to these questions are available. It is important that physicians become aware of cultural and subcultural differences in dietary patterns within the population in order to have a clear understanding of differences reported by researchers on studies of food intake. Since diet influences many cardiovascular risk factors such as hypertension, diabetes, and obesity, health care professionals should consider the influence of food purchasing and methods of food preparation on these risk factors. Some knowledge of these matters is essential for the development of effective preventive strategies.

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Articles for this Page are sponsored and approved by the American Heart Association, Georgia Affiliate. Those wishing to contribute papers to this Page are invited to send them to Dr. Laurence O. Watkins, Heart Page Editor, Section of Cardiology, Dept. of Medicine, MCG, Augusta, GA 30909.

The quotation from Margaret Walker's book, *Jubilee,* describes a common dietary pattern which is characteristic of the black population in Georgia. The dietary patterns of the Georgia population today can be traced back to the early 1880s. Large southern families learned to survive by economizing in the use of limited resources, such as the produce grown in small gardens and hogs and cattle raised on plantations. Some foods that were discarded or not favored by slave masters in the period before the Civil War were widely used in slave kitchens. Among these were pork snout and tail, chitterlings, and chicken wings.[2] Today these foods have been popularized by the new "soul-food" craze which emphasizes Black American cooking.

Many studies have shown that economic resources and educational attainment are correlated with the adequacy of diets.

In addition to the use of inexpensive food components, many methods were developed for preserving food in order to cope with future shortages. Thus, canning and curing meats with salt and sugar became common. When fat was extracted from the frying of bacon, the drippings were saved and reused. This practice persists, and though the physician may be unaware of it, it often contributes to patients' failure to limit dietary intake of saturated fats. In many families, though polyunsaturated vegetable oils are available, fat drippings are collected in a container and used for cooking vegetables, making breads such as cornbread, stuffings, and crackling bread, and even for frying meats. Some southerners believe that if bacon fat is not used for making cornbread, the bread is not the best!

Local methods of cooking fresh pork also contribute to unnecessary intake of saturated fat. The choice cuts of pork meat, those with less fat, have been the most expensive, while the pigs' tails, ears, head, feet, hocks, and skins are the least costly. Because of the collagen composition of these cuts, boiling is the method of cooking used commonly to tenderize the meat. After the desired degree of tenderness is reached, rice or pasta are added to the same container for further cooking. These starchy foods absorb both water and the fat melted from the pork, which confers a distinctive, desired flavor. It is difficult to change such methods of food preparation which have been used throughout several generations. However, patients should be advised to allow the boiled meat to cool: the fat which rises to the top may be lifted off with a spoon. This step alone could reduce the fat intake significantly.

Nutritionists attached to hospitals and health departments should be employed more widely for dietary intervention.

The diet described above emanates from a culture of poverty. In 1959, 30% of the Georgia population was classified as living below the poverty level. That figure has declined recently to more than 16%. In 1979, 74% of counties in Georgia had a greater percentage of their population living below the poverty level than the state average. In some states the percentage rises as high as 41%.[3] Thus, significant numbers of people have their food preferences and intake dictated by poverty. In other situations, some of the foods described are regarded as delicacies and for that reason are preferred.

Secular changes have occurred which affect dietary patterns. Food services have changed markedly in the last generation. The availability of "fast foods" has influenced in a decisive manner the lifestyles and dietary patterns of the American working class. For many individuals, more than two meals of the day are eaten away from home. Frying is the method used most commonly for rapid food preparation for the majority of Americans who eat away from home at midday. Table 1 summarizes the amount of fat and calories found in foods from three common fast food restaurants.

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Low incidence of side effects
CARDIZEM® (diltiazem HCl) produces an incidence of adverse reactions not greater than that reported with placebo therapy, thus contributing to the patient's sense of well-being.

*Cardizem is indicated in the treatment of angina pectoris due to coronary artery spasm and in the management of chronic stable angina (classic effort-associated angina) in patients who cannot tolerate therapy with beta-blockers and/or nitrates or who remain symptomatic despite adequate doses of these agents.

References:
1. Strauss WE, McIntyre KM, Parisi AF, et al: Safety and efficacy of diltiazem hydrochloride for the treatment of stable angina pectoris: Report of a cooperative clinical trial. Am J Cardiol 49:560-566, 1982.
2. Pool PE, Seagren SC, Bonanno JA, et al: The treatment of exercise-inducible chronic stable angina with diltiazem: Effect on treadmill exercise. Chest 78 (July suppl):234-238, 1980.

Reduces angina attack frequency*
42% to 46% decrease reported in multicenter study.[1]

Increases exercise tolerance*
In Bruce exercise test,[2] control patients averaged 8.0 minutes to onset of pain; Cardizem patients averaged 9.8 minutes ($P<.005$).

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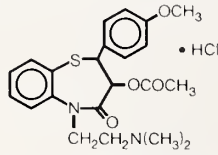
PROFESSIONAL USE INFORMATION

cardizem® (diltiazem HCl)

30 mg and 60 mg tablets

DESCRIPTION

CARDIZEM® (diltiazem hydrochloride) is a calcium ion influx inhibitor (slow channel blocker or calcium antagonist). Chemically, diltiazem hydrochloride is 1,5-Benzothiazepin-4(5H)one,3-(acetyloxy) -5-[2-(dimethylamino)ethyl]-2,3-dihydro-2-(4-methoxyphenyl)-, monohydrochloride,(+) -cis-. The chemical structure is:



Diltiazem hydrochloride is a white to off-white crystalline powder with a bitter taste. It is soluble in water, methanol, and chloroform. It has a molecular weight of 450.98. Each tablet of CARDIZEM contains either 30 mg or 60 mg diltiazem hydrochloride for oral administration.

CLINICAL PHARMACOLOGY

The therapeutic benefits achieved with CARDIZEM are believed to be related to its ability to inhibit the influx of calcium ions during membrane depolarization of cardiac and vascular smooth muscle.

Mechanisms of Action. Although precise mechanisms of its antianginal actions are still being delineated, CARDIZEM is believed to act in the following ways:

1. Angina Due to Coronary Artery Spasm: CARDIZEM has been shown to be a potent dilator of coronary arteries both epicardial and subendocardial. Spontaneous and ergonovine-induced coronary artery spasm are inhibited by CARDIZEM.
2. Exertional Angina: CARDIZEM has been shown to produce increases in exercise tolerance, probably due to its ability to reduce myocardial oxygen demand. This is accomplished via reductions in heart rate and systemic blood pressure at submaximal and maximal exercise work loads.

In animal models, diltiazem interferes with the slow inward (depolarizing) current in excitable tissue. It causes excitation-contraction uncoupling in various myocardial tissues without changes in the configuration of the action potential. Diltiazem produces relaxation of coronary vascular smooth muscle and dilation of both large and small coronary arteries at drug levels which cause little or no negative inotropic effect. The resultant increases in coronary blood flow (epicardial and subendocardial) occur in ischemic and nonischemic models and are accompanied by dose-dependent decreases in systemic blood pressure and decreases in peripheral resistance.

Hemodynamic and Electrophysiologic Effects. Like other calcium antagonists, diltiazem decreases sinoatrial and atrioventricular conduction in isolated tissues and has a negative inotropic effect in isolated preparations. In the intact animal, prolongation of the AH interval can be seen at higher doses.

In man, diltiazem prevents spontaneous and ergonovine-provoked coronary artery spasm. It causes a decrease in peripheral vascular resistance and a modest fall in blood pressure and, in exercise tolerance studies in patients with ischemic heart disease, reduces the heart rate-blood pressure product for any given work load. Studies to date, primarily in patients with good ventricular function, have not revealed evidence of a negative inotropic effect; cardiac output, ejection fraction, and left ventricular end diastolic pressure have not been affected. There are as yet few data on the interaction of diltiazem and beta-blockers. Resting heart rate is usually unchanged or slightly reduced by diltiazem.

Intravenous diltiazem in doses of 20 mg prolongs AH conduction time and AV node functional and effective refractory periods approximately 20%. In a study involving single oral doses of 300 mg of CARDIZEM in six normal volunteers, the average maximum PR prolongation was 14% with no instances of greater than first-degree AV block. Diltiazem-associated prolongation of the AH interval is not more pronounced in patients with first-degree heart block. In patients with sick sinus syndrome, diltiazem significantly prolongs sinus cycle length (up to 50% in some cases).

Chronic oral administration of CARDIZEM in doses of up to 240 mg/day has resulted in small increases in PR interval, but has not usually produced abnormal prolongation. There were, however, three instances of second-degree AV block and one instance of third-degree AV block in a group of 959 chronically treated patients.

Pharmacokinetics and Metabolism. Diltiazem is absorbed from the tablet formulation to about 80% of a reference capsule and is subject to an extensive first-pass effect, giving an absolute bioavailability (compared to intravenous dosing) of about 40%. CARDIZEM undergoes extensive hepatic metabolism in which 2% to 4% of the unchanged drug appears in the urine. In vitro binding studies show CARDIZEM is 70% to 80% bound to plasma proteins. Competitive ligand binding studies have also shown CARDIZEM binding is not altered by therapeutic concentrations of digoxin, hydrochlorothiazide, phenylbutazone, propranolol, salicylic acid, or warfarin. Single oral doses of 30 to 120 mg of CARDIZEM result in detectable plasma levels within 30 to 60 minutes and peak plasma levels two to three hours after drug administration. The plasma elimination half-life following single or multiple drug administration is approximately 3.5 hours. Desacetyl diltiazem is also present in the plasma at levels of 10% to 20% of the parent drug and is 25% to 50% as potent a coronary vasodilator as diltiazem. Therapeutic blood levels of CARDIZEM appear to be in the range of 50 to 200 ng/ml. There is a departure from dose-linearity when single doses above 60 mg are given; a 120-mg dose gave blood levels three times that of the 60-mg dose. There is no information about the effect of renal or hepatic impairment on excretion or metabolism of diltiazem.

INDICATIONS AND USAGE

1. **Angina Pectoris Due to Coronary Artery Spasm.** CARDIZEM is indicated in the treatment of angina pectoris due to coronary artery spasm. CARDIZEM has been shown effective in the treatment of spontaneous coronary artery spasm presenting as Prinzmetal's variant angina (resting angina with ST-segment elevation occurring during attacks).
2. **Chronic Stable Angina (Classic Effort-Associated Angina).** CARDIZEM is indicated in the management of chronic stable angina. CARDIZEM has been effective in controlled trials in reducing angina frequency and increasing exercise tolerance.

There are no controlled studies of the effectiveness of the concomitant use of diltiazem and beta-blockers or of the safety of this combination in patients with impaired ventricular function or conduction abnormalities.

CONTRAINDICATIONS

CARDIZEM is contraindicated in (1) patients with sick sinus syndrome except in the presence of a functioning ventricular pacemaker, (2) patients with second- or third-degree AV block except in the presence of a functioning ventricular pacemaker, and (3) patients with hypotension (less than 90 mm Hg systolic).

WARNINGS

1. **Cardiac Conduction.** CARDIZEM prolongs AV node refractory periods without significantly prolonging sinus node recovery time, except in patients with sick sinus syndrome. This effect may rarely result in abnormally slow heart rates (particularly in patients with sick sinus syndrome) or second- or third-degree AV block (six of 1243 patients for 0.48%). Concomitant use of diltiazem with beta-blockers or digitalis may result in additive effects on cardiac conduction. A patient with Prinzmetal's angina developed periods of asystole (2 to 5 seconds) after a single dose of 60 mg of diltiazem.
2. **Congestive Heart Failure.** Although diltiazem has a negative inotropic effect in isolated animal tissue preparations, hemodynamic studies in humans with normal ventricular function have not shown a reduction in cardiac index nor consistent negative effects on contractility (dp/dt). Experience with the use of CARDIZEM alone or in combination with beta-blockers in patients with impaired ventricular function is very limited. Caution should be exercised when using the drug in such patients.
3. **Hypotension.** Decreases in blood pressure associated with CARDIZEM therapy may occasionally result in symptomatic hypotension.
4. **Acute Hepatic Injury.** In rare instances, patients receiving CARDIZEM have exhibited reversible acute hepatic injury as evidenced by moderate to extreme elevations of liver enzymes. (See PRECAUTIONS and ADVERSE REACTIONS.)

PRECAUTIONS

General. CARDIZEM (diltiazem hydrochloride) is extensively metabolized by the liver and excreted by the kidneys and in bile. As with any new drug given over prolonged periods, laboratory parameters should be monitored at regular intervals. The drug should be used with caution in patients with impaired renal or hepatic function. In subacute and chronic dog and rat studies designed to produce toxicity, high doses of diltiazem were associated with hepatic damage. In special subacute hepatic studies, oral doses of 125 mg/kg and higher in rats were associated with histological changes in the liver which were reversible when the drug was discontinued. In dogs, doses of 20 mg/kg were also associated with hepatic changes; however, these changes were reversible with continued dosing.

Drug Interaction. Pharmacologic studies indicate that there may be additive effects in prolonging AV conduction when using beta-blockers or digitalis concomitantly with CARDIZEM. (See WARNINGS).

Controlled and uncontrolled domestic studies suggest that concomitant use of CARDIZEM and beta-blockers or digitalis is usually well tolerated. Available data are not sufficient, however, to predict the effects of concomitant treatment, particularly in patients with left ventricular dysfunction or cardiac conduction abnormalities. In healthy volunteers, diltiazem has been shown to increase serum digoxin levels up to 20%.

Carcinogenesis, Mutagenesis, Impairment of Fertility. A 24-month study in rats and a 21-month study in mice showed no evidence of carcinogenicity. There was also no mutagenic response in in vitro bacterial tests. No intrinsic effect on fertility was observed in rats.

Pregnancy. Category C. Reproduction studies have been conducted in mice, rats, and rabbits. Administration of doses ranging from five to ten times greater (on a mg/kg basis) than the daily recommended therapeutic dose has resulted in embryo and fetal lethality. These doses, in some studies, have been reported to cause skeletal abnormalities. In the perinatal/postnatal studies, there was some reduction in early individual pup weights and survival rates. There was an increased incidence of stillbirths at doses of 20 times the human dose or greater.

There are no well-controlled studies in pregnant women; therefore, use CARDIZEM in pregnant women only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers. It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, exercise caution when CARDIZEM is administered to a nursing woman if the drug's benefits are thought to outweigh its potential risks in this situation.

Pediatric Use. Safety and effectiveness in children have not been established.

ADVERSE REACTIONS

Serious adverse reactions have been rare in studies carried out to date, but it should be recognized that patients with impaired ventricular function and cardiac conduction abnormalities have usually been excluded.

In domestic placebo-controlled trials, the incidence of adverse reactions reported during CARDIZEM therapy was not greater than that reported during placebo therapy.

The following represent occurrences observed in clinical studies which can be at least reasonably associated with the pharmacology of calcium influx inhibition. In many cases, the relationship to CARDIZEM has not been established. The most common occurrences, as well as their frequency of presentation, are: edema (2.4%), headache (2.1%), nausea (1.9%), dizziness (1.5%), rash (1.3%), asthenia (1.2%), AV block (1.1%). In addition, the following events were reported infrequently (less than 1%) with the order of presentation corresponding to the relative frequency of occurrence.

Cardiovascular:	Flushing, arrhythmia, hypotension, bradycardia, palpitations, congestive heart failure, syncope.
Nervous System:	Paresthesia, nervousness, somnolence, tremor, insomnia, hallucinations, and amnesia.
Gastrointestinal:	Constipation, dyspepsia, diarrhea, vomiting, mild elevations of alkaline phosphatase, SGOT, SGPT, and LDH.
Dermatologic:	Pruritus, petechiae, urticaria, photosensitivity.
Other:	Polyuria, nocturia.

The following additional experiences have been noted:

A patient with Prinzmetal's angina experiencing episodes of vasospastic angina developed periods of transient asymptomatic asystole approximately five hours after receiving a single 60-mg dose of CARDIZEM.

The following postmarketing events have been reported infrequently in patients receiving CARDIZEM: erythema multiforme; leukopenia; and extreme elevations of alkaline phosphatase, SGOT, SGPT, LDH, and CPK. However, a definitive cause and effect between these events and CARDIZEM therapy is yet to be established.

OVERDOSAGE OR EXAGGERATED RESPONSE

Overdosage experience with oral diltiazem has been limited. Single oral doses of 300 mg of CARDIZEM have been well tolerated by healthy volunteers. In the event of overdosage or exaggerated response, appropriate supportive measures should be employed in addition to gastric lavage. The following measures may be considered:

Bradycardia	Administer atropine (0.60 to 1.0 mg). If there is no response to vagal blockade, administer isoproterenol cautiously.
High-Degree AV Block	Treat as for bradycardia above. Fixed high-degree AV block should be treated with cardiac pacing.
Cardiac Failure	Administer inotropic agents (isoproterenol, dopamine, or dobutamine) and diuretics.
Hypotension	Vasopressors (eg, dopamine or levarterenol bitartrate).

Actual treatment and dosage should depend on the severity of the clinical situation and the judgment and experience of the treating physician.

The oral/LD_{50}'s in mice and rats range from 415 to 740 mg/kg and from 560 to 810 mg/kg, respectively. The intravenous LD_{50}'s in these species were 60 and 38 mg/kg, respectively. The oral LD_{50} in dogs is considered to be in excess of 50 mg/kg, while lethality was seen in monkeys at 360 mg/kg. The toxic dose in man is not known, but blood levels in excess of 800 ng/ml have not been associated with toxicity.

DOSAGE AND ADMINISTRATION

Exertional Angina Pectoris Due to Atherosclerotic Coronary Artery Disease or Angina Pectoris at Rest Due to Coronary Artery Spasm. Dosage must be adjusted to each patient's needs. Starting with 30 mg four times daily, before meals and at bedtime, dosage should be increased gradually (given in divided doses three or four times daily) at one- to two-day intervals until optimum response is obtained. Although individual patients may respond to any dosage level, the average optimum dosage range appears to be 180 to 240 mg/day. There are no available data concerning dosage requirements in patients with impaired renal or hepatic function. If the drug must be used in such patients, titration should be carried out with particular caution.

Concomitant Use With Other Antianginal Agents:

1. **Sublingual NTG** may be taken as required to abort acute anginal attacks during CARDIZEM therapy.
2. **Prophylactic Nitrate Therapy**—CARDIZEM may be safely coadministered with short- and long-acting nitrates, but there have been no controlled studies to evaluate the antianginal effectiveness of this combination.
3. **Beta-blockers.** (See WARNINGS and PRECAUTIONS.)

HOW SUPPLIED

Cardizem 30-mg tablets are supplied in bottles of 100 (NDC 0088-1771-47) and in Unit Dose Identification Paks of 100 (NDC 0088-1771-49). Each green tablet is engraved with MARION on one side and 1771 engraved on the other. CARDIZEM 60-mg scored tablets are supplied in bottles of 100 (NDC 0088-1772-47) and in Unit Dose Identification Paks of 100 (NDC 0088-1772-49). Each yellow tablet is engraved with MARION on one side and 1772 on the other.

Issued 4/1/84

Another patient benefit product from

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MARION LABORATORIES, INC.
KANSAS CITY, MISSOURI 64137

TABLE 1 — Summary of Fat and Caloric Composition of Fast Food Items[4]

Food Items	*Calories*	*Fat/gm*
Wendy's		
Cheeseburger, single	520	30.0
Hamburger, double	630	34.0
Shake, Chocolate	390	15.0
McDonald's		
Big Mac	541	31.4
Egg McMuffin	352	20.0
Fish Fillet	402	22.7
French Fries	211	10.6
Kentucky Fried		
Original Recipe	830	46.0
Extra Crispy, dinner	950	54.0
Rib Piece	241	15.0
Thigh Piece	276	19.0

The percentage of the food dollar being spent for "eating out" has increased markedly since 1955. The convenience and moderate prices make eating away from home attractive to the consumer, and the opportunity to obtain a fully prepared meal has changed the trend in purchasing and eating patterns. The extent to which consumers select balanced meals depends upon their educational levels and their awareness of the nutritional benefits derived from foods. Though some segments of the population are well informed and have appropriate eating habits, others are less informed, or worse, may be victims of food fads or scientific jargon about processed foods. This information is often inadequately presented and may be misunderstood.

Canned foods frequently satisfy the needs of the working class as well as the school population. Luncheon meats are used daily and may be found on the breakfast table of many families. The sodium content of canned meats is typically high. Many canned meats are popular because they can be kept for prolonged periods and used in a variety of ways. Thus, vendors in mobile units travel from worksite to worksite at lunch selling packed canned meats such as Spam, Prem, and Vienna sausages. Crackers and cheese may also be supplied by mobile units. These combinations usually make for a satisfying lunch particularly for the worker whose time is limited. However, the sodium intake from eating canned foods, salted nuts, salted potato chips, crackers, cheese, and other such foods may be as high as 6 to 18 grams per day.

The fat and sodium content of some popular canned meats are reported in Table 2.

TABLE 2 — Fat and Sodium Composition of Processed Meats[4]

Luncheon and Canned Meats	*Fat/gms*	*Sodium/mg*
1 oz. Spam (Hormel)	7.4	336
1 sl. Prem	27.4	1012
1 oz. Potted Meat	5.4	—
1 sl. Liverwurst	9.1	211
1 T. Deviled Ham	4.2	117
1 sl. Bologna	8.2	364
1 sl. Olive loaf	4.5	416

Older adults for whom economic resources and educational levels are major determinants of food selection often purchase canned meats because of the convenience and minimal preparation which they require. Unfortunately, the elderly are also prone to have higher blood pressures and an increased prevalence of cardiovascular disease which may be aggravated by poor food choices.

Implications for Dietary Change

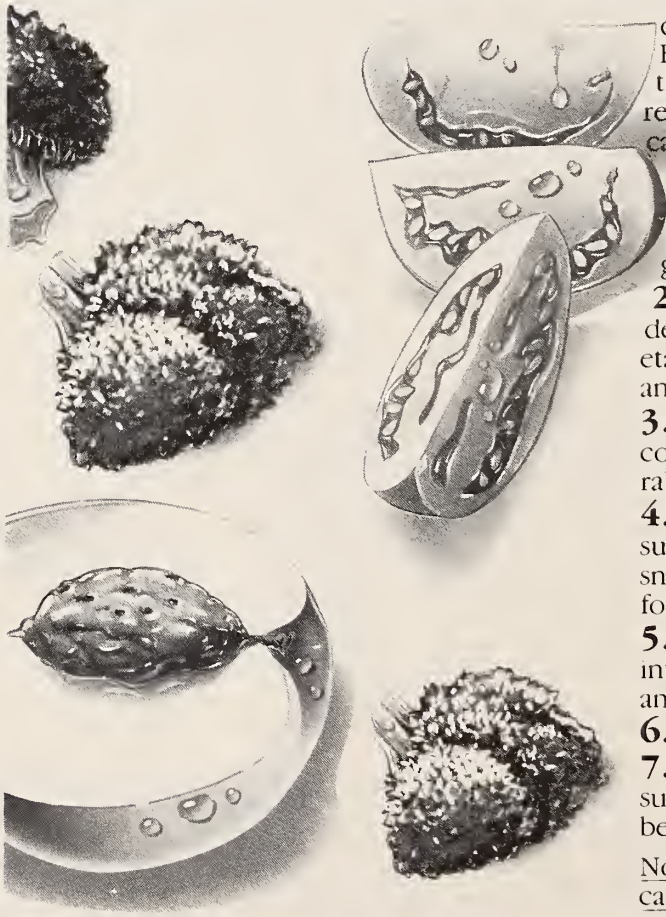
Many studies have shown that economic resources and educational attainment are correlated with the adequacy of diets. The problem facing practitioners who wish to have their patients alter established dietary patterns is to suggest changes which their patients can make. This requires adequate counseling and frequent follow-up. Behavioral change in this area is often gradual and may be difficult for the patient to maintain. The busy practitioner may find it time-consuming and hence undesirable. However, resources are available throughout the state which can be used for nutrition counseling. Nutritionists attached to hospitals and health departments should be employed more widely for dietary intervention.

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3. Peisher AV, Bachtel DC. Poverty in Georgia. The University of Georgia. College of Agriculture, Cooperative Extension Service, Volume 1, Number 9, March, 1984.
4. Pennington JAT, Church HN. Food Values of Portions Commonly Used. Harper & Row, 13th ed., New York, 1980.

THIS SPACE CONTRIBUTED AS A PUBLIC SERVICE

A defense against cancer can be cooked up in your kitchen.



There is evidence that diet and cancer are related. Follow these modifications in your daily diet to reduce chances of getting cancer:

1. Eat more high-fiber foods such as fruits and vegetables and whole-grain cereals.
2. Include dark green and deep yellow fruits and vegetables rich in vitamins A and C.
3. Include cabbage, broccoli, brussels sprouts, kohlrabi and cauliflower.
4. Be moderate in consumption of salt-cured, smoked, and nitrite-cured foods.
5. Cut down on total fat intake from animal sources and fats and oils.
6. Avoid obesity.
7. Be moderate in consumption of alcoholic beverages.

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See following page for brief summary of prescribing information.

SORBITRATE®
(ISOSORBIDE DINITRATE)

Please consult full prescribing information before use. A summary follows:

INDICATIONS AND USAGE: SORBITRATE (isosorbide dinitrate) is indicated for the treatment and prevention of angina pectoris. All dosage forms of isosorbide dinitrate may be used prophylactically to decrease frequency and severity of anginal attacks and can be expected to decrease the need for sublingual nitroglycerin.

The sublingual and chewable forms of the drug are indicated for acute prophylaxis of angina pectoris when taken a few minutes before situations likely to provoke anginal attacks. Because of a slower onset of effect, the oral forms of isosorbide dinitrate are not indicated for acute prophylaxis.

CONTRAINDICATIONS: SORBITRATE is contraindicated in patients who have shown purported hypersensitivity or idiosyncrasy to it or other nitrates or nitrites. Epinephrine and related compounds are ineffective in reversing the severe hypotensive events associated with overdose and are contraindicated in this situation.

WARNINGS: The benefits of SORBITRATE during the early days of an acute myocardial infarction have not been established. If one elects to use organic nitrates in early infarction, hemodynamic monitoring and frequent clinical assessment should be used because of the potential deleterious effects of hypotension.

PRECAUTIONS: General: Severe hypotensive response, particularly with upright posture, may occur with even small doses of SORBITRATE. The drug should therefore be used with caution in subjects who may have blood volume depletion from diuretic therapy or in subjects who have low systolic blood pressure (eg, below 90 mmHg). Paradoxical bradycardia and increased angina pectoris may accompany nitrate-induced hypotension. Nitrate therapy may aggravate the angina caused by hypertrophic cardiomyopathy.

Marked symptomatic, orthostatic hypotension has been reported when calcium channel blockers and organic nitrates were used in combination. Dose adjustment of either class of agents may be necessary.

Tolerance to this drug and cross-tolerance to other nitrates and nitrites may occur. Tolerance to the vascular and antianginal effects of isosorbide dinitrate or nitroglycerin has been demonstrated in clinical trials, experience through occupational exposure, and in isolated tissue experiments in the laboratory. The importance of tolerance to the appropriate use of isosorbide dinitrate in the management of patients with angina pectoris has not been determined. However, one clinical trial using treadmill exercise tolerance (as an end point) found an 8-hour duration of action of oral isosorbide dinitrate following the first dose (after a 2-week placebo washout) and only a 2-hour duration of effect of the same dose after 1 week of repetitive dosing at conventional dosing intervals. On the other hand, several trials have been able to differentiate isosorbide dinitrate from placebo after 4 weeks of therapy and, in open trials, an effect seems detectable for as long as several months.

Tolerance clearly occurs in industrial workers continuously exposed to nitroglycerin. Moreover, physical dependence also occurs since chest pain, acute myocardial infarction, and even sudden death have occurred during temporary withdrawal of nitroglycerin from the workers. In clinical trials in angina patients, there are reports of anginal attacks being more easily provoked and of rebound in the hemodynamic effects soon after nitrate withdrawal. The relative importance of these observations to the routine, clinical use of isosorbide dinitrate is not known. However, it seems prudent to gradually withdraw patients from isosorbide dinitrate when the therapy is being terminated, rather than stopping the drug abruptly.

Information for Patients: Headache may occur during initial therapy with SORBITRATE. Headache is usually relieved by the use of standard headache remedies or by lowering the dose and tends to disappear after the first week or two of use.

Drug Interactions: Alcohol may enhance any marked sensitivity to the hypotensive effect of nitrates.

Isosorbide dinitrate acts directly on vascular smooth muscle; therefore, any other agent that depends on vascular smooth muscle as the final common path can be expected to have decreased or increased effect depending on the agent.

Carcinogenesis, Mutagenesis, Impairment of Fertility: No long-term studies in animals have been performed to evaluate the carcinogenic potential of this drug. A modified two-litter reproduction study in rats fed isosorbide dinitrate at 25 or 100 mg/kg/day did not reveal any effects on fertility or gestation or any remarkable gross pathology in any parent or offspring fed isosorbide dinitrate as compared with rats fed a basal-controlled diet.

Pregnancy Category C: Isosorbide dinitrate has been shown to cause a dose-related increase in embryotoxicity (increase in mummified pups) in rabbits at oral doses 35 and 150 times the maximum recommended human daily dose. There are no adequate and well-controlled studies in pregnant women. SORBITRATE should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers: It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when SORBITRATE is administered to a nursing woman.

Pediatric Use: The safety and effectiveness of SORBITRATE in children has not been established.

ADVERSE REACTIONS: Adverse reactions, particularly headache and hypotension, are dose-related. In clinical trials at various doses, the following have been observed:

Headache is the most common (reported incidence varies widely, apparently being dose-related, with an average occurrence of about 25%) adverse reaction and may be severe and persistent. Cutaneous vasodilation with flushing may occur. Transient episodes of dizziness and weakness, as well as other signs of cerebral ischemia associated with postural hypotension, may occasionally develop (the incidence of reported symptomatic hypotension ranges from 2% to 36%). An occasional individual will exhibit marked sensitivity to the hypotensive effects of nitrates and severe responses (nausea, vomiting, weakness, restlessness, pallor, perspiration, and collapse) may occur even with the usual therapeutic dose. Drug rash and/or exfoliative dermatitis may occasionally occur. Nausea and vomiting appear to be uncommon. Case reports of clinically significant methemoglobinemia are rare at conventional doses of organic nitrates. The formation of methemoglobin is dose-related and, in the case of genetic abnormalities of hemoglobin that favor methemoglobin formation, even conventional doses of organic nitrate could produce harmful concentrations of methemoglobin.

DOSAGE AND ADMINISTRATION: For the treatment of angina pectoris, the usual starting dose for sublingual SORBITRATE is 2.5 to 5 mg; for chewable tablets, 5 mg; for oral (swallowed) tablets, 5 to 20 mg; and for controlled-release forms, 40 mg.

SORBITRATE should be titrated upward until angina is relieved or side effects limit the dose. In ambulatory patients, the magnitude of the incremental dose increase should be guided by measurements of standing blood pressure.

The initial dosage of sublingual or chewable SORBITRATE for prophylactic therapy in angina pectoris patients is generally 5 or 10 mg every 2 to 3 hours. Adequate controlled clinical studies demonstrating the effectiveness of chronic maintenance therapy with these dosage forms have not been reported.

SORBITRATE in oral doses of 10 to 40 mg given every 6 hours or in oral controlled-release doses of 40 to 80 mg given every 8 to 12 hours is generally recommended. The extent to which development of tolerance should modify the dosage program has not been defined. *The oral controlled-release forms of isosorbide dinitrate should not be chewed.*

DOSAGE FORMS AVAILABLE: Sublingual Tablets (2.5, 5, 10 mg); Chewable Tablets (5, 10 mg); Oral Tablets (5, 10, 20, 30, 40 mg); Sustained Action Tablets (40 mg).

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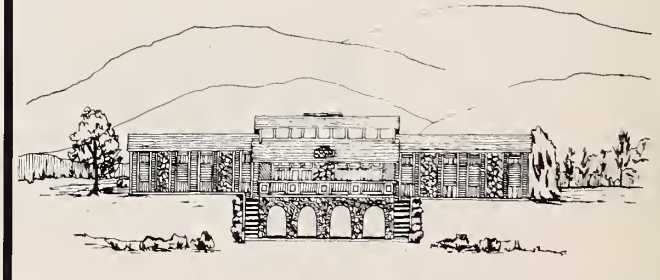
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(404) 256-9296

*References available upon request.

CHEMICAL DEPENDENCY

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(OPENING FEBRUARY 1985)

president's letter



The Times Are Changing

THERE ARE THOSE of our membership who remember the days when the practice of medicine involved a patient who went to his private physician with an illness, real or imagined. He was diagnosed and treated by whatever method, and when he was finished he paid his bill by cash or in kind. Those who could not pay were treated gratis.

Times changed. The majority of medical care in Georgia is still rendered by the physician in "private practice" but the money to pay his bill comes in large part from a third party of some sort, either governmental or insurance.

Times continue to change. A new entity has entered the scene — contract medicine. Various payment mechanisms, all involving contracts of some type between the patient, payor, and doctor are being thrust upon us. HMOs, IPAs, and PPOs are buzz words.

Physicians feel threatened by outside parties setting arbitrary fee reductions without giving physicians any opportunity to have input into what it takes to deliver quality care under strict peer review and in a cost-effective manner, including putting some of their fees "at risk" to insure the above. They don't like to be told whom they can treat and to whom they can refer and with fees set arbitrarily by another party. Physicians are concerned because the nature of the contract process involves negotiating away some of the freedoms they previously enjoyed. But times are changing, and these things are happening today in Georgia.

In an effort to answer the repeated question, "What is the MAG going to do about all this?," a called meeting of the MAG House of Delegates was held in October, 1984. A resolution was adopted directing the MAG to develop a plan for a physicians organization to assist its members, when called upon, in the contract medicine arena. There were those who disagreed with the action taken by your elected leaders in calling the Special Session and also in the outcome of the deliberations by the House. Time will tell if a wise decision was reached by the delegates. Your leadership and ultimately the delegates were facing two decisions: "Whether to leave footprints in the sand of time or whether to leave a print of where we sat." Let's hope we leave footprints pointed in the right direction.

We will, as directed, establish the framework for a physicians organization of the MAG and present this to the next session of the House for consideration before implementation.

Someone recently remarked, "The problems facing medicine are always with us. They may be different problems today than they were yesterday, but they never seem to end." In this regard, our times have not changed at all!

S. William Clark Jr.

the association
the association
the association



L. B. STOREY RETIRES

We are sad to announce to our membership that Mr. L. B. Storey, longtime member of the MAG staff, has retired as of December 28, 1984, after 13 years of service. He has served as Business Manager of the *Journal* during that time, as well as Director of Finance for the Association.

Anyone who has worked with L. B. knows him to be one of those rare men — always friendly, faultlessly courteous, and ever eager to help. It is this last quality that has particularly endeared him to all of us in the Headquarters office. Whatever the job asked of him by our officers, members, or fellow staff, he has cheerfully and selflessly pitched in. It is also characteristic of L. B.'s work for MAG that he has steadfastly worked for the benefit of the Association and our membership without striving to take personal credit.

We asked L. B. to give us a thumbnail sketch of himself. With his usual modesty and wit, he submitted the following:

CURTAILED RESUME OF L. B. STOREY, JR.
Born: December 4, 1918, Macon, Georgia. Left there in 1920, as I was a bit slow learning to walk. Moved by wonderful parents to Atlanta. Graduated Fulton County Schools in 1935. Attended Draughon School of Commerce for 2 years, then attended Georgia State College for 1½ years — everything commercially oriented. Spent from 1942 till November 1945 in WW II — major specialty, meteorology.

Worked in Ford dealerships from 1945 to 1968. Heart attack and HBP stopped auto career in 1968.

Came from the ridiculous to the sublime — from alley cat tactics to ethical behavior, when I started working, like hell, for John Kiser at MAA. In 1972, I graduated to MAG for the next 13 years. Now, at 66 years of age, I know the meaning of too soon old and too late smart. Even physicians should learn that. Sixteen years — enjoyable time with great friendships. Retirement looks good, and after a vacation and rest, may work a bit more.

Adios, compadres!

Adios, L. B.!

NEW MEMBERS

Adkins, Robert J., Richmond—ACT—AN
812 Thirteenth St., Augusta 30902

Allen, Herbert V., III, Walton—ACT (N-2)—ORS
333 Alcova St., P. O. Box 748, Monroe 30655

Anderson, John L., Cobb—ACT (N-1)—P
1970 Cliff Valley Way, Ste. 210, Atlanta 30329

Beacham, Charles H., Richmond—ACT—PTH/P
3523 W. Lake Dr., Augusta 30907

Beeber, Bruce J., Newton-Rockdale—ACT (N-2)—PD
1400 Milstead Rd., Ste. C, Conyers 30207

Cohen, Daniel H., Cobb—ACT—IM/NEP
833 Campbell Hill St., NW, Ste. 116, Marietta 30090

Crenshaw, John T., Jackson-Banks—ACT—FP
Memorial Ave., Jefferson 30549

Delong, Thomas G., Hall—ACT (N-1)—GS
194 Gold St., Gainesville 30505

Doblar, Dennis D., Richmond—ACT (N-2)—AN
126 Lakeview Ct., Martinez 30907

Freeman, Gordon G., Gordon—ACT (N-2)—FP
4 Hospital Ct., P. O. Box 247, Calhoun 30701

Harris, Ronald W., Dougherty—ACT (N-2)—R
417 Fourth St., Albany 31707

Hayes, Robert P. B., Muscogee—ACT—OPH
2300 Manchester Exway., Bldg. E, Columbus 31904

Leake, James E., Cobb—ACT—GS/PS
222 Cherokee, Marietta 30060

Lemley, James L. (Mr.), Richmond—ST
Medical College of Georgia, Box 1378, Augusta 30912

Mardhekar, Suresh V., Muscogee—ACT—AN
Doctors Building, Ste. 404, Columbus 31993

Miller, William H., South Georgia—ACT (N-2)—GS
2704 N. Oak Center, F, Valdosta 31602

Park, Hyun Y., St. John's Parish—ACT—OBG
115 W. Oglethorpe, Hinesville 31313

Passons, Garry A., Muscogee—ACT (N-2)—OPH
1929 Eighth Ave., Columbus 31901

Perlow, David L., Cobb—ACT—U
2550 Windy Hill Rd., Ste. 105, Marietta 30067

Pedrides, Georga P., Richmond—ACT—AN
812 Thirteenth St., Augusta 30901

Pollack, Ross B., Muscogee—Service—D
6400 Green Island Dr., #20, Columbus 31904-2267

Schaufler, Eugene M., Troup—ACT—OBG
303 Medical Dr., LaGrange 30240

Shumate, Robert E. L., Muscogee—ACT—OPH
613 Talbotton Rd., Columbus 31904

Siegan, Steven W., Walton—ACT (N-2)
P. O. Box 551, Monroe 30655

Slomka, Charles V., Coweta—ACT (N-2)—OBG
58 Hospital Rd., Ste. 202, Newnan 30263

Soffer, Tanya, Cobb—ACT (N-2)—PTH
3400 Rennes Dr., Atlanta 30319

Warren, Daniel C., Muscogee—Service—PM—PH
503 Yeager Ave., Fort Benning 31905

Whitehead, Thomas P., Clayton-Fayette—ACT—R/TR
255 Professional Ct., Riverdale 30274

Yarn, Barbara I., Coweta—ACT (N-2)—AN
60 Hospital Rd., Newnan 30263

PERSONALS

Fifth District

Atlanta plastic surgeon, **William E. Huger, Jr., M.D.,** was elected President-elect of the American Society of Plastic and Reconstructive Surgeons, Inc., at the Society's Annual Scientific Meeting held October 9-14 in Las Vegas, Nevada. Dr. Huger is in private practice and Clinical Assistant Professor of Surgery at Emory University School of Medicine.



Dr. William E. Huger, Jr., President-elect of the American Society of Plastic and Reconstructive Surgery.



Dr. Ellis B. Keener (right), a neurosurgeon from Gainesville and Chairman of MAG's Scientific Assembly Committee, and Dr. Ernest C. Fokes (left), an ophthalmologist from Moultrie, were among those Georgia physicians attending the Scientific Assembly last November.

Nanette K. Wenger, M.D. Professor of Medicine (Cardiology), Emory University School of Medicine, has been elected President of the Scientific Council on the Rehabilitation of Cardiac Patients of the International Society and Federation of Cardiology for a 4-year term. As president of the Council, she becomes a member of the Scientific Board of the International Society and Federation of Cardiology. The election was held at a meeting of the Council in Munich, November 4-7.

Sixth District

Anthony A. Malizia, Jr., M.D., opened his urologic practice in Riverdale on November 5. He will serve on the staffs at Henry General Hospital and Clayton General Hospital. In addition to his private practice, Dr. Malizia will teach at the Emory University School of Medicine.

Tenth District

The Georgia Surgical Society recently elected to membership **Stephen Boyle, M.D.,** and **Millard I. Ross, M.D.** on September 19 at the annual meeting.

Bruce Beeber, M.D., opened his practice in pediatrics on November 3 in Covington. He has also joined the staff of Newton General Hospital.

DEATHS

Phil E. Roberson

Phil E. Roberson, M.D., died recently in Albany. He was 70. Dr. Roberson received his M.D. degree from Emory University. He served as chief resident in surgery at City Memorial Hospital and Kate Bittering Hospital, both in Winston-Salem, NC, before entering private practice in surgery, obstetrics, and gynecology in Albany in 1942. He received a Presidential Certificate of Merit, Selective Service, in 1948.

He served as chief of staff at Phoebe Putney Hospital from 1950 to 1954 and was also a Palmyra Park Hospital staff member. A former president of the Second District Medical Society, Dr. Roberson served on the State Board of Medical Examiners from 1949 to 1951.

Survivors include his wife, one son, two daughters, and three grandchildren.

Luther M. Vinton, Jr.

Luther M. Vinton, Jr., M.D., died on November 20. Dr. Vinton had served the MAG and the DeKalb Medical Society well. He was a member of the Board of Directors of MAG and an Alternate Delegate to the AMA. His service to DeKalb Medical Society as Editor of their *Newsletter* was exceptional, and he also served well in other offices.

Classifieds . . .

PHYSICIAN WANTED

Emergency Medicine Physicians — National Emergency Services has immediate openings for BE/BC Physicians in EM, IM, FP, and GS. For further information, please contact: Jacquelyn Purcell, 1-800-645-4848.

General Surgeons, Internists and Family Practitioners interested in practice opportunities in the Southeast. Please contact: Director, Physician Recruitment, P.O. Box 2345, Anniston, AL 36202, (205) 236-2907.

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North Fulton Medical Center, Roswell — Brand new facility available for immediate occupancy opposite the N.F.M.C. All lease-hold improvements have already been completed. Space available for lease or sub-lease. For further information call Colin Richmand, DMD, (404) 442-1010 or (404) 252-4052.

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Mountain land with panoramic view, 5 to 30 acres available. Far from the maddening crowd, near picturesque village, golf, and tennis facilities 1 mile, 17 miles northeast of Gainesville. Private road ½ mile off Highway 129. Secluded, elevation 1500 feet, at the foot of Long Mountain. Ideal for nature lovers. Nice stream on property. Residential only. Call owner (404) 865-4903.

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SITUATION WANTED

Board certified urologist, semiretired spring 1986, seeks part-time salaried position as hospital house physician, office urology, VA consultant, surgi-center, clinic, public health, industrial medicine, etc. Prefers coastal area, Carolinas or Georgia. Salary negotiable, will send full details and CV. Reply to Box 1-A, c/o *Journal*.



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References: 1. Kales J *et al*: *Clin Pharmacol Ther* 12:691-697, Jul-Aug 1971. **2.** Kales A *et al*: *Clin Pharmacol Ther 18*:356-363, Sep 1975. **3.** Kales A *et al*: *Clin Pharmacol Ther 19*:576-583, May 1976. **4.** Kales A *et al*: *Clin Pharmacol Ther 32*:781-788, Dec 1982. **5.** Frost JD Jr, DeLucchi MR: *J Am Geriatr Soc 27*:541-546, Dec 1979. **6.** Kales A, Kales JD: *J Clin Pharmacol 3*:140-150, Apr 1983. **7.** Greenblatt DJ, Allen MD, Shader RI: *Clin Pharmacol Ther 21*:355-361, Mar 1977. **8.** Zimmerman AM: *Curr Ther Res 13*:18-22, Jan 1971. **9.** Amrein R *et al*: *Drugs Exp Clin Res 9*(1):85-99, 1983. **10.** Monti JM: *Methods Find Exp Clin Pharmacol 3*:303-326, May 1981. **11.** Greenblatt DJ *et al*: *Sleep 5*(Suppl 1):S18-S27, 1982. **12.** Kales A *et al*: *Pharmacology 26*:121-137, 1983.

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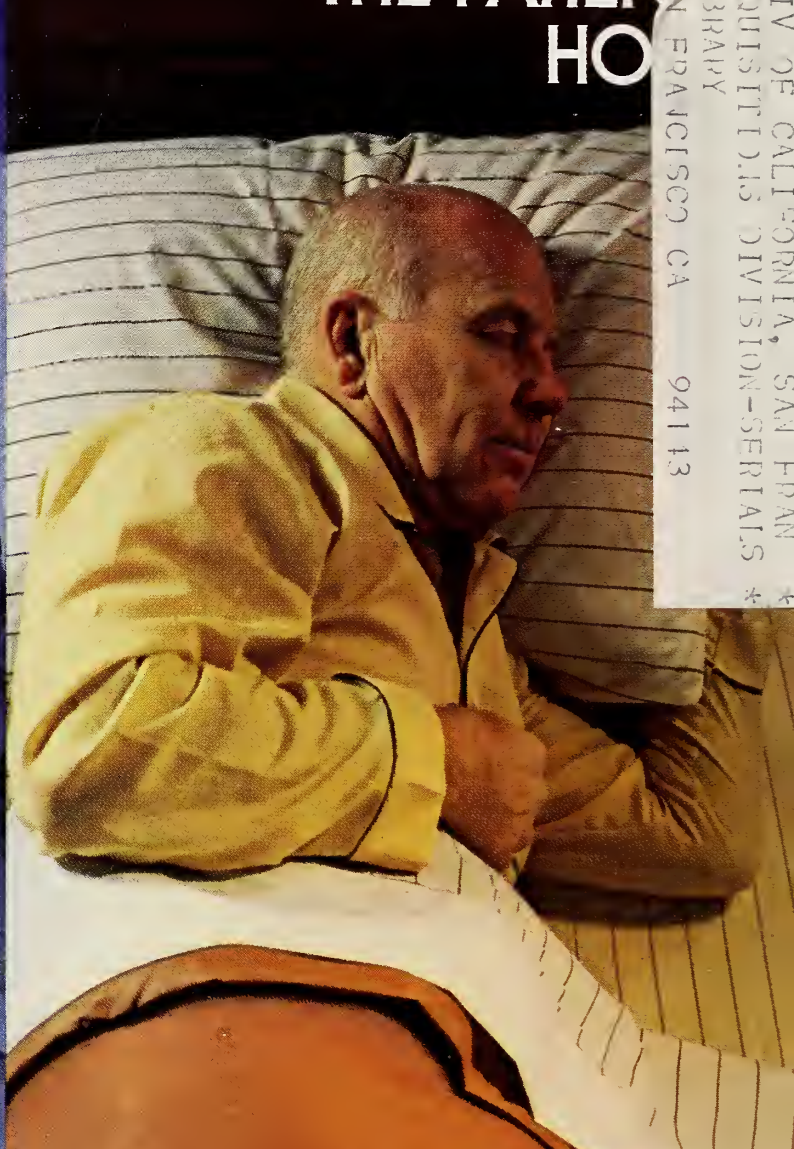
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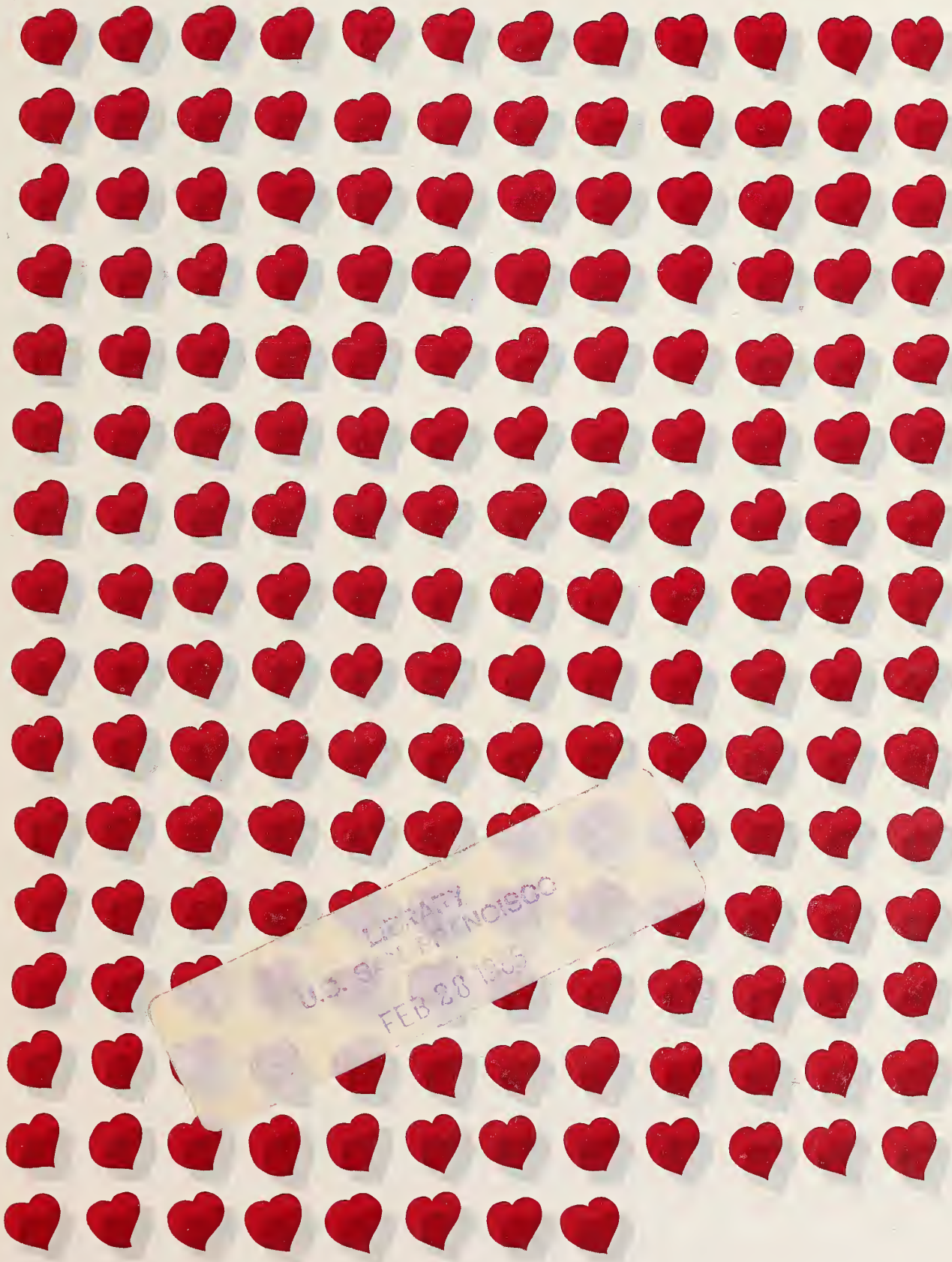
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In support of its increased services, Ridgeview has also opened a new Conference Center where professional and public educational programs or conferences shall be hosted or provided. Ridgeview continues to be committed to increasing awareness and expertise in the areas of mental health and chemical dependence problems.

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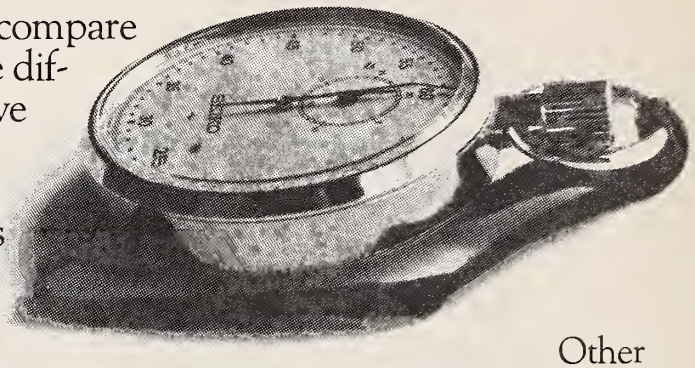
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MEDICAL MEETING CALENDAR

FEBRUARY

18-23 — *Augusta:* **Family Practice Symposium.** AMA Category 1 and AAFP prescribed credit. Contact Div. of Cont. Ed., MCG, Augusta 30912. PH:404/828-3967.

20 — *Atlanta:* **Prenatal Care: Nutrition, Drugs, Exercise.** Contact Ann Robinson, Dir. of Cont. Ed., College of Health Sciences, Ga. State Univ., Univ. Plaza, Atlanta 30303. PH:404/658-3066.

21-22 — *Atlanta:* **Sickle Cell 1984: Problems and Issues.** Category 1 credit. Contact Dir. of Med. Ed., Morehouse School of Medicine, 720 Westview Dr., SW, Atlanta 30314.

22-23 — *Augusta:* **Pediatric and Adolescent Gynecology.** Category 1 credit. Contact Div. of Cont. Ed., MCG, Augusta 30912. PH:404/828-3967.

23 — *Atlanta:* **A Comprehensive Course on the ND:YAG Laser.** Category 1 credit. Contact Ginger Lineberger, Hallum-Arnold Eye Found., Inc., 3280 Howell Mill Rd., NW, Ste. 104, Atlanta 30327. PH:404/351-2713.

26 — *Atlanta:* **Sexual Abuse and Exploitation of Children, Part II.** Contact Ann Robinson, Dir. of Cont. Ed., College of Health Sciences. Ga. State Univ., Univ. Plaza, Atlanta 30303. PH:404/568-3066.

MARCH

9/16 — *Breckinridge, CO:* **10th Annual Snow Job in GYN/OB.** Contact Office of CME, Emory Univ. Sch. of Med., 1440 Clifton Rd., NE, Ste. 110, Atlanta 30322. PH:404/329-5695.

11-15 — *Park City, Utah:* **The Injured Athlete: Prevention Management and Rehabilitation.** Category 1 credit. Contact Office of CME, Emory Univ. Sch. of Med., 1440 Clifton Rd., NE, Ste. 110, Atlanta 30322. PH:404/329-5695.

11-16 — *Augusta:* **20th Annual Family Practice Symposium.** AMA Category 1 and AAFP prescribed credit. Contact Div. of Cont. Ed., MCG, Augusta 30912. PH:404/828-3967.

13 — *Augusta:* **Antepartum Electronic Fetal Heart Rate Monitoring Theory and Practice.** Category 1 credit. Contact Div. of Cont. Ed., MCG, Augusta 30912. PH:404/828-3967.

18-22 — *Park City, Utah:* **Snowplow Orthopaedics: Selected Topics for the Primary Care Physician.** Category 1 credit. Contact Office of CME, Emory Univ. Sch. of Med., 1440 Clifton Rd., NE, Ste. 110, Atlanta 30322. PH:404/329-5695.

22 — *Columbus:* **Controversies in Cancer Therapy.** Category 1 credit. Contact Janet Bonfiglio, RN, American Cancer Socy., Ga. Div., 1422 W. Peachtree St., Atlanta 30309. PH:404/892-0026.

22-23 — *Atlanta:* **Sports Medicine.** Category 1 credit. Contact Dir. of Med. Ed., Morehouse School of Medicine, 740 Westview Dr., SW, Atlanta 30314.

29-30 — *Atlanta:* **Lasers for Ophthalmic Surgery (Argon/Krypton/Yag).** Category 1 credit. Contact Ginger Lineberger, Hallum-Arnold Eye Found., Inc., 3280 Howell Mill Rd., NW, Ste. 104, Atlanta 30327. PH:404/351-2713.

APRIL

11-12 — *Atlanta:* **Pharmacology for the Anesthesiologist.** Category 1 credit. Contact Office of CME, Emory Univ. Sch. of Med., 1440 Clifton Rd., NE, Ste. 110, Atlanta 30322. PH:404/329-5695.

13-14 — *Atlanta:* **The Cardiac Patient: Management for Cardiopulmonary Bypass II.** Category 1 credit. Contact Office of CME, Emory Univ. Sch. of Med., 1440 Clifton Rd., NE, Ste. 110, Atlanta 30322. PH:404/329-5695.

13-18 — *Atlanta:* **American Academy of Pediatrics Annual Meeting.** Contact AAP, 1801 Hinman Ave., P.O. Box 1034, Evanston, IL 60204. PH:312/869-4255.

17-20 — *Columbus:* **Georgia Association of Pathologists Annual Meeting.** Contact A. Bleakley Chandler, MD, President, GAP, MCG, Augusta 30912. PH:404/828-2923.

20-24 — *Sea Island:* **Masters in GYN/OB.** Category 1 credit. Contact Office of CME, Emory Univ. Sch. of Med., 1440 Clifton Rd., NE, Ste. 110, Atlanta 30322. PH:404/329-5695.

21-25 — *Atlanta:* **American Assn. of Neurological Surgeons Annual Meeting.** Contact AANS, 22 S. Washington St., Park Ridge, IL 60068.

25-27 — *Atlanta:* **Practical Applications of Computers in Health Care: The Integration of Clinical and Administration Information.** Category 1 credit. Contact Office of CME, Emory Univ. Sch. of Med., 1440 Clifton Rd., NE, Ste. 110, Atlanta 30322. PH:404/329-5695.

25-28 — *Savannah:* **MAG House of Delegates.** Contact MAG, 938 Peachtree St., NE, Atlanta 30309. PH:404/876-7535 or 1-800-282-0224 (toll free in Ga.).

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2-5 — *Sea Island:* **Georgia Society of Ophthalmology.** Category 1 credit. Contact Talitha Russell, MAG, 938 Peachtree St., NE, Atlanta 30309. PH:404/876-7535 or 1-800-282-0224 (toll free in Ga.).

3-4 — *Atlanta:* **Second Annual Conference on Primary Care for the Underserved.** Category 1 credit. Contact Dir. of Med. Ed., Morehouse School of Medicine, 740 Westview Dr., SW, Atlanta 30314.

6-10 — *Atlanta:* **Family Medicine Board Review.** Category 1 credit. Contact Office of CME, Emory Univ. Sch. of Med., 1440 Clifton Rd., NE, Suite 110, Atlanta 30322. PH:404/329-5695.

9-12 — *Amelia Island, Fla.:* **Georgia Radiological Society Annual Meeting.** Category 1 credit. Contact Lloyd B. Schnuck, Jr., M.D., 9 Medical Arts Ctr., Savannah 31405. PH:912/355-3642.

9-12 — *Savannah:* **American Academy of Anesthesia Associates 9th Annual Meeting.** Category 1 credit. Contact AAAA, P.O. Box 77253, Atlanta 30357. PH:404/875-1735.

12-16 — *Atlanta:* **American Urological Assn. Annual Meeting.** Contact AUA, 1120 N. Charles St., Baltimore, MD 21201. PH:301/727-1100.

23-24 — *Atlanta:* **Update in Pathology and Laboratory Medicine.** Category 1 credit. Contact Office of CME, Emory Univ. Sch. of Med., 1440 Clifton Rd., NE, Ste. 110, Atlanta 30322. PH:404/329-5695.

25 — *Atlanta:* **A Comprehensive Course on the ND:YAG Laser.** Category 1 credit. Contact Ginger Lineberger, Hallum-Arnold Eye Found., Inc., 3280 Howell Mill Rd., NW, Ste. 104, Atlanta 30327. PH:404/351-2713.

31-June 2 — *Sea Island:* **Georgia Neurosurgical Society.** Contact Joseph Barnett, M.D., Pres., GNS, 776 Canton Rd., Marietta 30066.

Management of Intracranial Arteriovenous Malformations

by James H. Wood, M.D.

Preoperative interventional intravascular embolization of AVMs has further improved the operative results by reducing both intraoperative blood loss and cerebral edema associated with "normal-pressure breakthrough" in adjacent brain.

Abstract

The advent of the operating microscope and improved hypotensive neuroanesthesia has reduced the operative mortality and morbidity of arteriovenous malformations (AVMs) and made surgery a treatment of choice in approximately 65-70% of cases. Preoperative interventional intravascular embolization of AVMs has further improved the operative results by reducing both intraoperative blood loss and cerebral edema associated with "normal-pressure breakthrough" in adjacent brain. Embolization alone may reduce the size of AVMs in the treatment of intolerable vascular headache, progressive neurologic deficits, and possibly intractable seizures in patients who may not be surgical candidates. Encouraging results have also been reported in the application of proton-beam radiation therapy to AVMs.

These recent therapeutic developments, together with refinements in computed tomography and cerebral angiography, mandate more frequent consideration of intracranial AVM in differential diagnoses.

Dr. Wood is Director of the Cerebral Blood Flow Laboratory of Emory University Hospital. Send reprint requests to him at the Division of Neurosurgery, Emory University Clinic, 1365 Clifton Rd., NE, Atlanta, GA 30322.

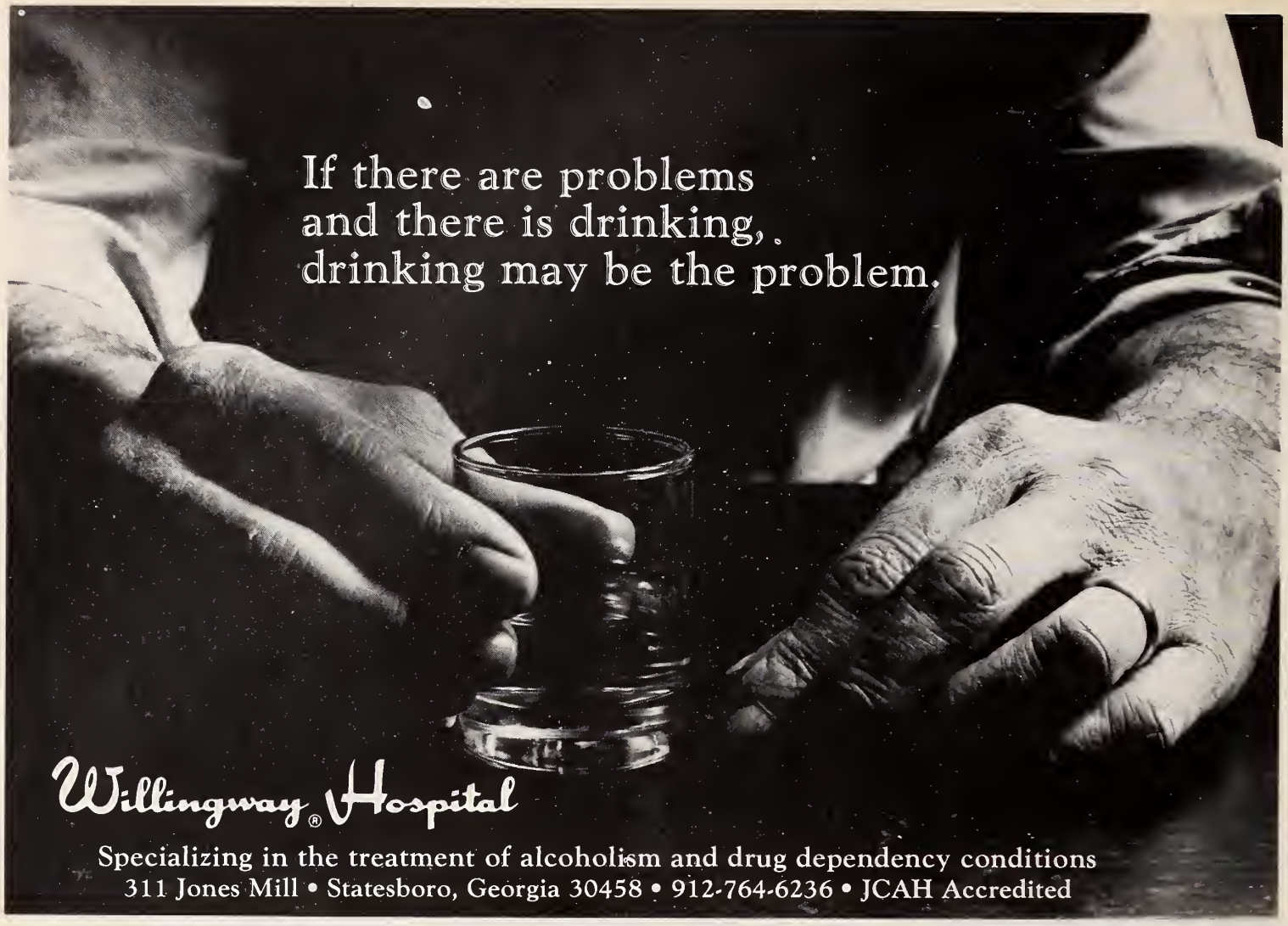
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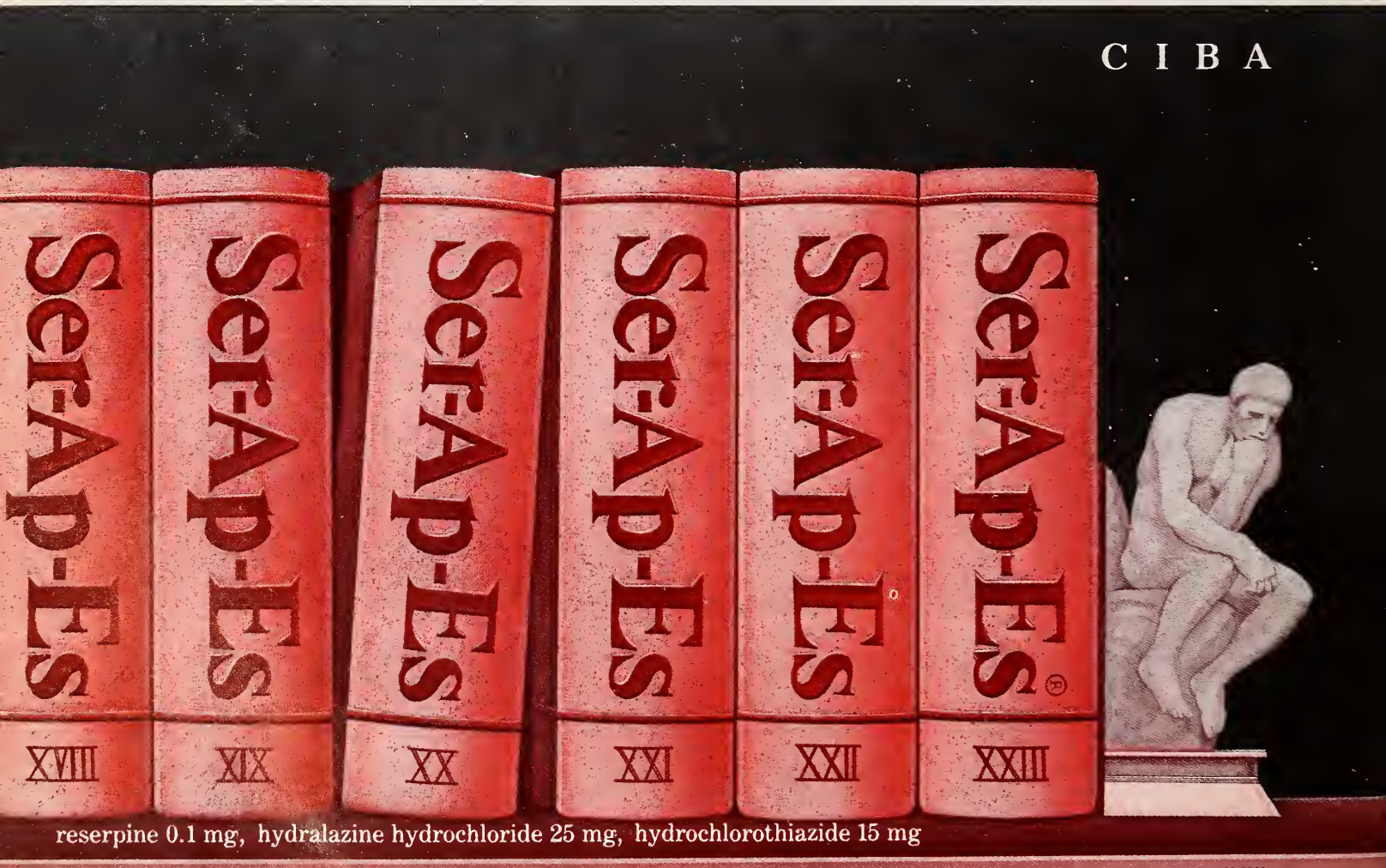
The majority of patients having intracranial hemorrhage secondary to a ruptured arteriovenous malformation (AVM) develop intracerebral hematomas rather than subarachnoid hemorrhage (SAH). The average yearly risk for a first hemorrhage in a patient with an unruptured AVM is about 2-3%.[1] The natural history of AVMs is considerably more benign than that of aneurysms. The rebleed rate for AVMs is approximately 6% during the first year and then 2% per year thereafter, with a mortality of 13% for the rebleed.[1] Oddly, smaller AVMs are more apt to bleed than larger ones.

In addition to hemorrhage, AVMs may enlarge and increase their mass or sump effect[2] or may even spontaneously thrombose. Approximately 88% are located above the tentorium, and 12% are predominantly in the posterior fossa.[3] The incidence of aneurysms occurring in association with AVMs is 6-9%, which is higher than the 1-5% incidence of aneurysms in the general population[4] (Figure 1).

Clinical Presentation

Approximately 55% of patients with intracranial AVM present with hemorrhage; 30% present with seizures, while the remaining cases have intolerable vascular headaches or progressive neurologic deficits.[5, 6]


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Diagnostic Evaluation

With respect to patients with AVMs, most presenting with intracranial hemorrhage have computed tomographic (CT) evidence of intracerebral hematoma rather than SAH; thus, CT should be the initial diagnostic procedure (Figure 2). Extension of blood into the ventricular system is associated with severe neurologic dysfunction. A high-density lesion without mass effect has been reported on CT scans of 48% of AVM patients presenting with seizures.[6] Dilatation of the ipsilateral lateral ventricle indicating an atrophic process is also a common finding in this group of patients. Following intravenous contrast administration, demonstration of prominent or enlarged feeding arteries and/or draining veins occurs in about 20% of patients with a large AVM.[6] If the CT demonstrates no intracerebral hemorrhage or subarachnoid blood, then lumbar puncture may be necessary to diagnose SAH.

Angiography is crucial in the diagnosis and management of cranial AVMs. All arteries that contribute to the malformation as well as the draining veins must be carefully delineated if the anatomical evaluation of the lesion is to be accurate. Not only must angiography assess contributions from both carotid and vertebral circulations but also potential contributions from the external carotid artery as well as occasionally from the thyrocervical trunk should be evaluated. Subtraction and magnification techniques are valuable for defining small feeding vessels. An angiographic grading scheme for AVMs has been proposed to be useful in preoperative assessments.[8] AVMs are usually characterized by grossly dilated serpentine efferent and afferent vessels, racemose tangle of increased vascularity, and a rapid circulation time with arteriovenous shunting[7] (Figure 3). The massive shunting of blood flow through the AVM may result in near nonvisualization of the hemispheric cerebral arteries and may indicate those patients who are more apt to develop cerebral edema in adjacent brain as a result of "normal-pressure breakthrough"[9] when the AVM is surgically excised. The vessels adjacent to the AVM are usually not displaced unless an intracerebral hema-



Figure 1 — Lateral right and left carotid angiograms of patient with bifrontal AVMs and multiple giant aneurysms who presented with subarachnoid hemorrhage. Author clipped proximal anterior cerebral artery and gradually occluded common carotid artery. Patient has returned to full-time job as publishing executive.

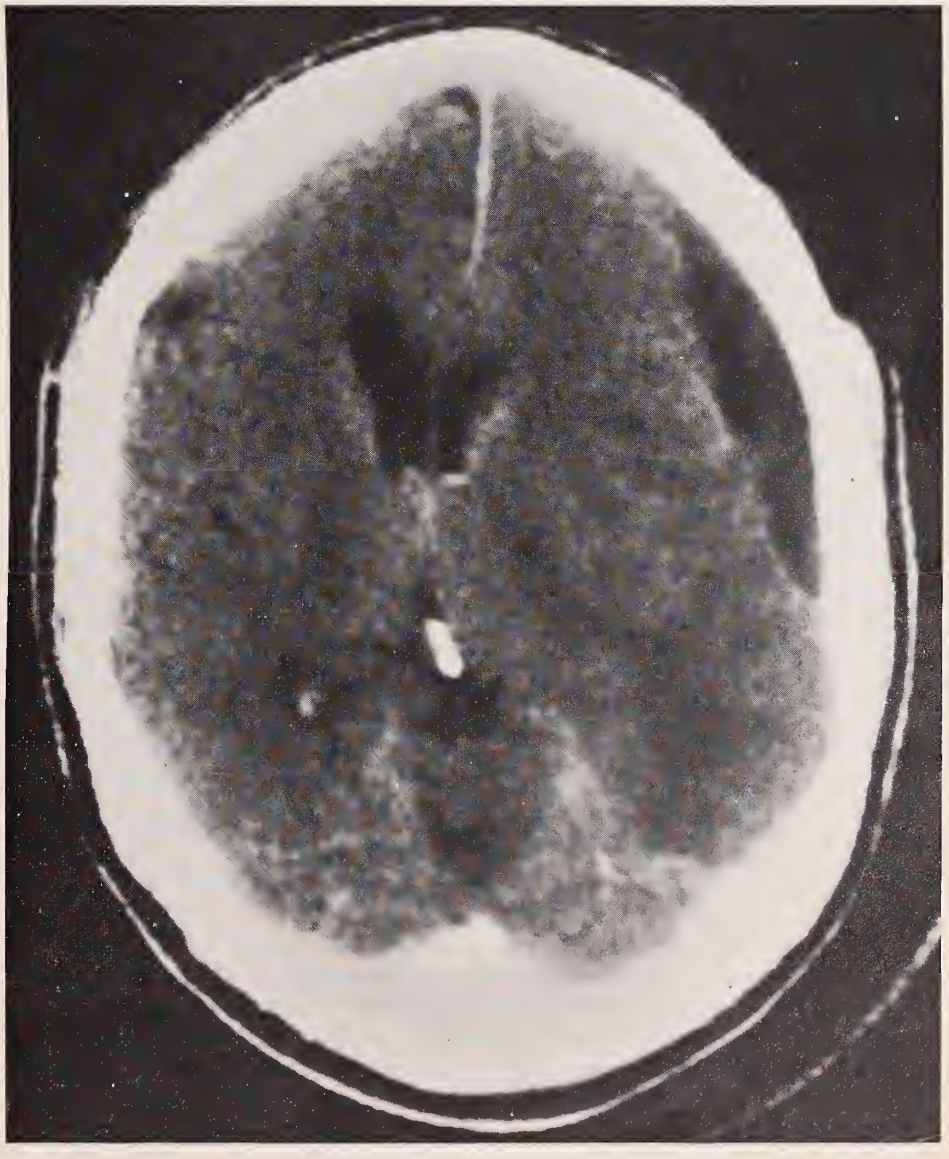


Figure 2 — Computed tomograph (CT) of patient with left hypodense extracerebral collection with mass effect shifting midline from left to right. At surgery, author found subacute subdural hematoma overlying the left opercular AVM.

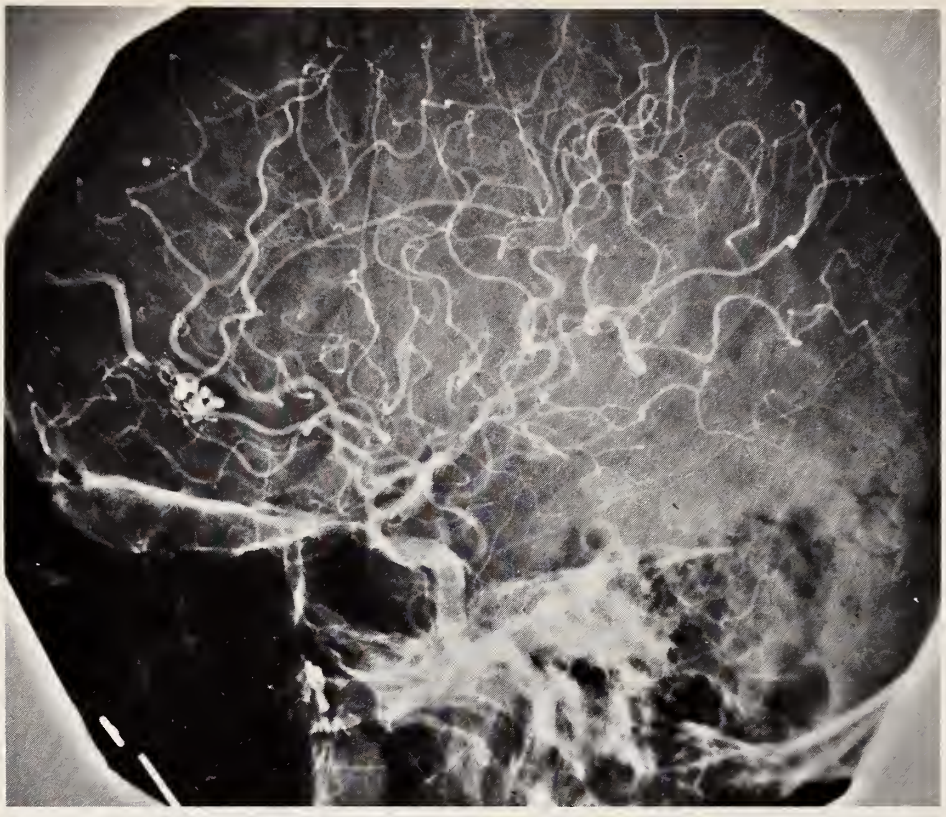


Figure 3 — Lateral projection of left carotid angiogram of same patient as Figure 2 demonstrating AVM of opercular cortex of dominant hemisphere. Note rapid shunting of flow from opercular and frontopolar arteries through AVM to early draining vein emptying into superior sagittal sinus. Author totally excised AVM without neurologic deficit.

toma is present. Dural components of the malformation may be visualized on external carotid artery injections in 27% of cases of AVM.[5]

Surgical Indications

Hemorrhage is the only undisputed indication for surgery, since total excision is required to eliminate the risk of rebleeding. Progressive intractable neurologic disability is generally an accepted indication. Other proposed indications include the presence of AVMs discovered without prior bleeding if favorably situated for excision with minimal risk of producing a functional deficit, small AVMs associated with prior minor bleeding and occupying a functionally important region, and seizures not controlled by rigorous medical management.[10]

Despite nonrandomization, several comparison studies have shown about 6-12% mortality among surgically treated patients and 19-20% mortality in conservatively treated cases.[11, 12] Generally, total excision of AVMs should be performed whenever possible; approximately 65-70% of patients with intracranial AVMs are surgical candidates.[13]

Surgical Management

Since the risk of early recurrent hemorrhage is so much less for AVM than for aneurysms and since hematoma resolution should be promoted,[13] the author does not employ antifibrinolytic agents in the treatment of ruptured AVMs. Patients undergoing preoperative deterioration should likewise undergo repeat blood electrolyte determinations to detect possible secretion of inappropriate antidiuretic hormone (SIADH) as well as repeat CT scanning to detect hydrocephalus, worsening edema surrounding an intracerebral hematoma, or the infrequent recurrent hemorrhage.

With respect to intracranial AVMs, the aim of definitive surgery is the removal of the shunt which is the direct communication between the arterial supply and venous drainage which does not contain an interposing capillary bed.[14] Unless a life-threatening hematoma is present which demands early intervention, the operation for an AVM is an elective procedure and should be deferred 3-4 weeks to allow for the patient's recovery from the acute phase of the SAH.[13] For those patients whose shunting of blood through the AVM is so great that the normal cerebral arteries of the adjacent brain do not opacify on angiography,[9] the author prefers to employ preoperative embolization of the AVM to reduce the risk of "normal-pressure breakthrough" edema and bleeding that may occur during surgery.[13] Embolization is carried out until good angiographic filling of normal branches is visualized and then, after approximately 7 days delay, surgery is undertaken. Preoperative embolization is also useful in reducing or obliterating the deep major feeding arteries which would be difficult to expose at surgery.[15] Embolization of dural components of the AVM, if present, prior to surgery also reduces blood loss during the incision of the scalp. Routine presurgical embolization is not advocated, because blocking of the major feeding arteries may lead to greater participation of deeper and surgically less accessible arteries.[13]

If the major indication for surgery was a previous hemorrhage, then the risk of recurrent hemorrhage persists if a portion of the AVM is retained. Postoperative angiography should be performed and if residual AVM persists, then another operation is indicated.[13] The causes of postoperative deterioration of the patient are the same for AVM as for aneurysms (formation of hematoma in operative site, hydrocephalus, SIADH, and hypoxia), except that postoperative cerebral edema is more common following the excision of large high-flow fistulae.[10] Surgical mortality and morbidity reported for selected cerebral AVMs is as low as 2% and 10%, respectively,[15] but others have reported respective rates of 6-12% and 19-20%.[11, 12]

Percutaneous Intravascular Embolization

Intravascular embolization of AVM is effective as the sole form of therapy in certain patients who have not had previous hemorrhage. Despite some contrary evidence,[16] the rate of rebleeding is thought not to be significantly reduced unless the AVM is totally obliterated with emboli. The indications for embolization include the following: 1) reduction of intracerebral steal phenomenon;[13] 2)

alleviation of intolerable vascular headache;[13, 15] 3) possible reduction in intractable seizures, especially in the presence of AVMs in the temporal lobe.[13, 15] AVMs best treated with embolization are those whose feeding arteries establish an obtuse angle with the parent artery so that the flow of emboli will be into the AVM rather than straying into normal vessels.[15] Thus, it is easier to embolize AVMs supplied by the posterior and middle cerebral arteries. Ideally, for proper direction of the flow of emboli, the ratio between the size of the major feeding artery and the normal vessels in the vicinity of the AVM should be approximately 4:1. Usually radiopaque silastic spheres (Heyer-Schulte Corporation, Goleta, California 93107) are employed for the embolization of AVM of the brain under radiographic control[17] (Figure 4). Procedure is terminated when the AVM is completely obliterated, if the patient develops neurologic deficits, or when emboli stray into normal vessels (Figure 5). As the blood flow in the AVM is reduced by embolization, the flow differential between the AVM and the normal vessels decreases, thus increasing the risk that the emboli will flow into the normal arterial system. Most neurologic deficits associated with stray emboli are temporary; the incidence of permanent complications is about 2%.[15]

Recently, emphasis has been placed on the obliteration of dural components of AVMs employing polyvinyl alcohol (Ivalon) sponge (Unipoint Laboratories, High Point, North Carolina 27260) embolized through the external carotid circulation (Figure 6). Obliteration of dural AVMs has been successful in relieving intolerable headaches.

As yet, the author has no experience with catheter-introduced bucrylate embolization of AVM, thus readers are referred to other publications.[18]

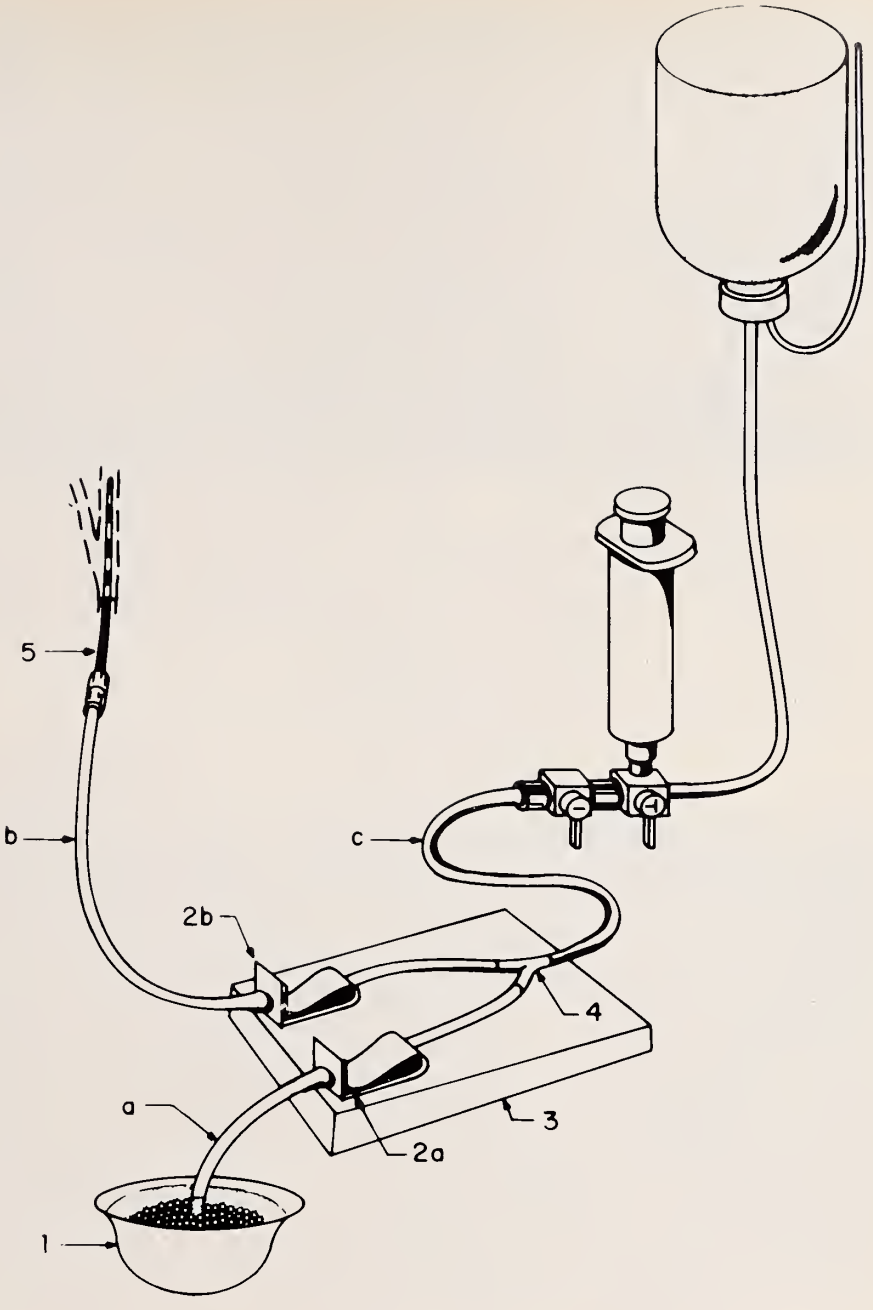


Figure 4 — Diagram of embolization device for Silastic spheres. System consists primarily of Y-tube. Tube a sucks the spheres from Reservoir 1. Tube b is attached to intracarotid catheter, and Tube c is attached to 30-cc syringe connected to bottle of sterile physiologic salt solution. Two stopcocks are attached to c limb of Y as well as to syringe and reservoir. Clamps 2a and 2b are opened and closed alternately to permit the suction of sphere from Reservoir 1 through Tube a into Tube c, and its subsequent injection in the arterial catheter. Supporting platform, 3, helps stabilize device during embolization. Y connection, 4, is made of glass. All tubing is transparent and permits passage of spheres measuring up to 3 mm in diameter. (Available from Cook, Inc., P.O. Box 489, Bloomington, Indiana 47401). Modified from Hilal and Michelsen,[17] with permission.

Radiation Therapy

Both conventional and proton-beam radiotherapy have been advocated for the treatment of AVMs. Reports of the usefulness of conventional radiation therapy have thus far been anecdotal.[19] Stereotactic Bragg-peak proton-beam therapy induces subendothelial deposition of collagen and hyaline substance, which narrows the lumens of small vessels and thickens the walls of the malformation during the first 12 to 24 months after the procedure.[20] Proposed indications for this type of therapy are AVMs considered inaccessible to surgery or embolization such as those lesions which are large, centrally located, or lying in the speech areas of the dominant cerebral hemisphere or in the brain stem.[20] Among 75 consecutive patients treated with Bragg-peak proton-beam radiation, the protection from death due to hemorrhage appeared to develop gradually, with no protection conferred during the first 12 months. Among the 44% of

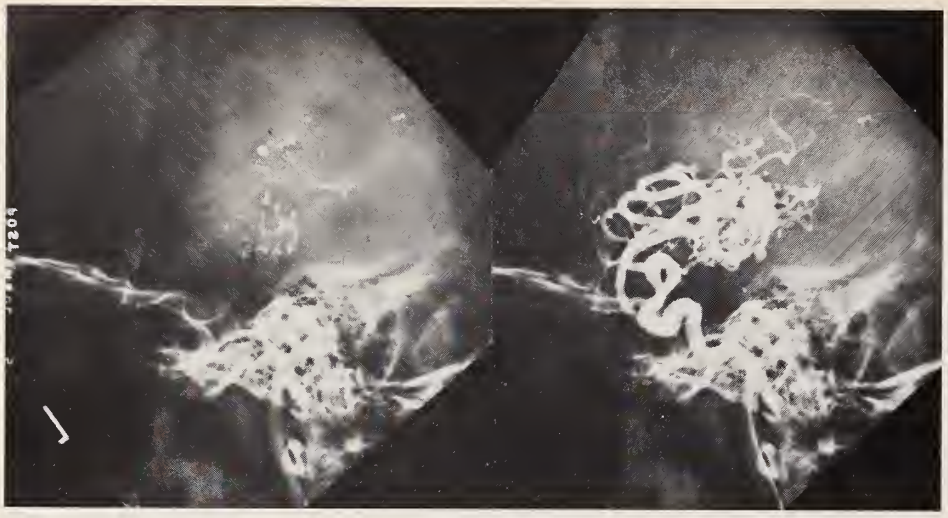


Figure 5 — Left: Lateral skull radiograph demonstrating radiopaque silastic spheres within large AVM in dominant hemisphere of patient with intolerable headaches. Note three stray emboli in parietal branch of middle cerebral artery. Embolization was performed as combined procedure with Dr. James C. Hoffman. Right: Lateral projection of left carotid angiogram following embolization with silastic spheres demonstrating residual AVM. Embolization procedure was terminated when three spheres strayed past AVM to lodge in parietal artery. No neurologic deficit resulted from embolization, and headaches were substantially relieved.

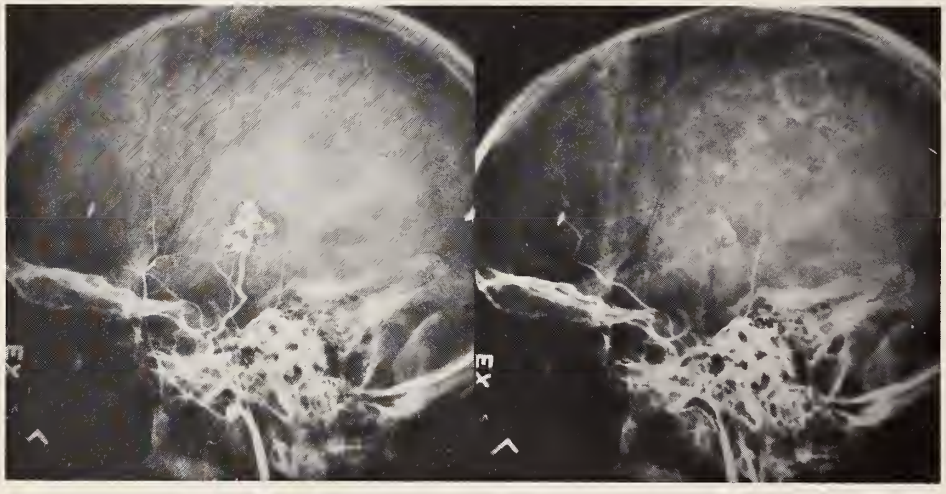


Figure 6 — Left: Lateral view of left selective external carotid angiogram revealing dural component of AVM in patient with intolerable vascular headaches. Right: Obliteration of dural AVM by embolization of Ivalon sponge through external carotid artery as combined procedure with Dr. James C. Hoffman. Embolization greatly relieved headaches.

these patients who presented with hemorrhage and who were followed for 1-16 years, no disabling fixed neurologic deficit due to hemorrhage occurred after 12 months following proton-beam irradiation.[20] Two deaths from hemorrhage occurred in the first 12 months. Seizures, headaches, and progressive neurologic deficits were in most cases arrested or improved. The AVM was angiographically obliterated in 20%, reduced in size by at least one-half in 56%, and did not change in 13% of these cases (Figure 7).

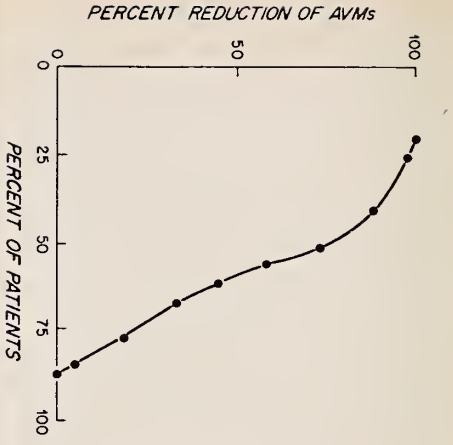


Figure 7 — Graph of percent reduction of AVMs in patients over 2 to 16 year follow-up period after stereotaxic Bragg-peak proton-beam radiation. From Kjellberg et al,[20] *with permission.*

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*Cardizem is indicated in the treatment of angina pectoris due to coronary artery spasm and in the management of chronic stable angina (classic effort-associated angina) in patients who cannot tolerate therapy with beta-blockers and/or nitrates or who remain symptomatic despite adequate doses of these agents.

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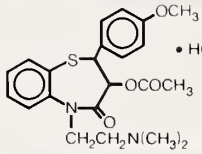
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30 mg and 60 mg tablets

DESCRIPTION

CARDIZEM® (diltiazem hydrochloride) is a calcium ion influx inhibitor (slow channel blocker or calcium antagonist). Chemically, diltiazem hydrochloride is 1,5-Benzothiazepin-4(5H)one,3-(acetyloxy) -5-[2-(dimethylamino)ethyl]-2,3-dihydro-2-(4-methoxyphenyl)-, monohydrochloride,(+) -cis-. The chemical structure is:



Diltiazem hydrochloride is a white to off-white crystalline powder with a bitter taste. It is soluble in water, methanol, and chloroform. It has a molecular weight of 450.98. Each tablet of CARDIZEM contains either 30 mg or 60 mg diltiazem hydrochloride for oral administration.

CLINICAL PHARMACOLOGY

The therapeutic benefits achieved with CARDIZEM are believed to be related to its ability to inhibit the influx of calcium ions during membrane depolarization of cardiac and vascular smooth muscle.

Mechanisms of Action. Although precise mechanisms of its antianginal actions are still being delineated, CARDIZEM is believed to act in the following ways:

1. Angina Due to Coronary Artery Spasm: CARDIZEM has been shown to be a potent dilator of coronary arteries both epicardial and subendocardial. Spontaneous and ergonovine-induced coronary artery spasm are inhibited by CARDIZEM.
2. Exertional Angina: CARDIZEM has been shown to produce increases in exercise tolerance, probably due to its ability to reduce myocardial oxygen demand. This is accomplished via reductions in heart rate and systemic blood pressure at submaximal and maximal exercise work loads.

In animal models, diltiazem interferes with the slow inward (depolarizing) current in excitable tissue. It causes excitation-contraction uncoupling in various myocardial tissues without changes in the configuration of the action potential. Diltiazem produces relaxation of coronary vascular smooth muscle and dilation of both large and small coronary arteries at drug levels which cause little or no negative inotropic effect. The resultant increases in coronary blood flow (epicardial and subendocardial) occur in ischemic and nonischemic models and are accompanied by dose-dependent decreases in systemic blood pressure and decreases in peripheral resistance.

Hemodynamic and Electrophysiologic Effects. Like other calcium antagonists, diltiazem decreases sinoatrial and atrioventricular conduction in isolated tissues and has a negative inotropic effect in isolated preparations. In the intact animal, prolongation of the AH interval can be seen at higher doses.

In man, diltiazem prevents spontaneous and ergonovine-provoked coronary artery spasm. It causes a decrease in peripheral vascular resistance and a modest fall in blood pressure and, in exercise tolerance studies in patients with ischemic heart disease, reduces the heart rate-blood pressure product for any given work load. Studies to date, primarily in patients with good ventricular function, have not revealed evidence of a negative inotropic effect; cardiac output, ejection fraction, and left ventricular end diastolic pressure have not been affected. There are as yet few data on the interaction of diltiazem and beta-blockers. Resting heart rate is usually unchanged or slightly reduced by diltiazem.

Intravenous diltiazem in doses of 20 mg prolongs AH conduction time and AV node functional and effective refractory periods approximately 20%. In a study involving single oral doses of 300 mg of CARDIZEM in six normal volunteers, the average maximum PR prolongation was 14% with no instances of greater than first-degree AV block. Diltiazem-associated prolongation of the AH interval is not more pronounced in patients with first-degree heart block. In patients with sick sinus syndrome, diltiazem significantly prolongs sinus cycle length (up to 50% in some cases).

Chronic oral administration of CARDIZEM in doses of up to 240 mg/day has resulted in small increases in PR interval, but has not usually produced abnormal prolongation. There were, however, three instances of second-degree AV block and one instance of third-degree AV block in a group of 959 chronically treated patients.

Pharmacokinetics and Metabolism. Diltiazem is absorbed from the tablet formulation to about 80% of a reference capsule and is subject to an extensive first-pass effect, giving an absolute bioavailability (compared to intravenous dosing) of about 40%. CARDIZEM undergoes extensive hepatic metabolism in which 2% to 4% of the unchanged drug appears in the urine. In vitro binding studies show CARDIZEM is 70% to 80% bound to plasma proteins. Competitive ligand binding studies have also shown CARDIZEM binding is not altered by therapeutic concentrations of digoxin, hydrochlorothiazide, phenylbutazone, propranolol, salicylic acid, or warfarin. Single oral doses of 30 to 120 mg of CARDIZEM result in detectable plasma levels within 30 to 60 minutes and peak plasma levels two to three hours after drug administration. The plasma elimination half-life following single or multiple drug administration is approximately 3.5 hours. Desacetyl diltiazem is also present in the plasma at levels of 10% to 20% of the parent drug and is 25% to 50% as potent a coronary vasodilator as diltiazem. Therapeutic blood levels of CARDIZEM appear to be in the range of 50 to 200 ng/ml. There is a departure from dose-linearity when single doses above 60 mg are given; a 120-mg dose gave blood levels three times that of the 60-mg dose. There is no information about the effect of renal or hepatic impairment on excretion or metabolism of diltiazem.

INDICATIONS AND USAGE

1. **Angina Pectoris Due to Coronary Artery Spasm.** CARDIZEM is indicated in the treatment of angina pectoris due to coronary artery spasm. CARDIZEM has been shown effective in the treatment of spontaneous coronary artery spasm presenting as Prinzmetal's variant angina (resting angina with ST-segment elevation occurring during attacks).
2. **Chronic Stable Angina (Classic Effort-Associated Angina).** CARDIZEM is indicated in the management of chronic stable angina. CARDIZEM has been effective in controlled trials in reducing angina frequency and increasing exercise tolerance.

There are no controlled studies of the effectiveness of the concomitant use of diltiazem and beta-blockers or of the safety of this combination in patients with impaired ventricular function or conduction abnormalities.

CONTRAINDICATIONS

CARDIZEM is contraindicated in (1) patients with sick sinus syndrome except in the presence of a functioning ventricular pacemaker, (2) patients with second- or third-degree AV block except in the presence of a functioning ventricular pacemaker, and (3) patients with hypotension (less than 90 mm Hg systolic).

WARNINGS

1. **Cardiac Conduction.** CARDIZEM prolongs AV node refractory periods without significantly prolonging sinus node recovery time, except in patients with sick sinus syndrome. This effect may rarely result in abnormally slow heart rates (particularly in patients with sick sinus syndrome) or second- or third-degree AV block (six of 1243 patients for 0.48%). Concomitant use of diltiazem with beta-blockers or digitalis may result in additive effects on cardiac conduction. A patient with Prinzmetal's angina developed periods of asystole (2 to 5 seconds) after a single dose of 60 mg of diltiazem.
2. **Congestive Heart Failure.** Although diltiazem has a negative inotropic effect in isolated animal tissue preparations, hemodynamic studies in humans with normal ventricular function have not shown a reduction in cardiac index nor consistent negative effects on contractility (dp/dt). Experience with the use of CARDIZEM alone or in combination with beta-blockers in patients with impaired ventricular function is very limited. Caution should be exercised when using the drug in such patients.
3. **Hypotension.** Decreases in blood pressure associated with CARDIZEM therapy may occasionally result in symptomatic hypotension.
4. **Acute Hepatic Injury.** In rare instances, patients receiving CARDIZEM have exhibited reversible acute hepatic injury as evidenced by moderate to extreme elevations of liver enzymes. (See PRECAUTIONS and ADVERSE REACTIONS.)

PRECAUTIONS

General. CARDIZEM (diltiazem hydrochloride) is extensively metabolized by the liver and excreted by the kidneys and in bile. As with any new drug given over prolonged periods, laboratory parameters should be monitored at regular intervals. The drug should be used with caution in patients with impaired renal or hepatic function. In subacute and chronic dog and rat studies designed to produce toxicity, high doses of diltiazem were associated with hepatic damage. In special subacute hepatic studies, oral doses of 125 mg/kg and higher in rats were associated with histological changes in the liver which were reversible when the drug was discontinued. In dogs, doses of 20 mg/kg were also associated with hepatic changes; however, these changes were reversible with continued dosing.

Drug Interaction. Pharmacologic studies indicate that there may be additive effects in prolonging AV conduction when using beta-blockers or digitalis concomitantly with CARDIZEM. (See WARNINGS).

Controlled and uncontrolled domestic studies suggest that concomitant use of CARDIZEM and beta-blockers or digitalis is usually well tolerated. Available data are not sufficient, however, to predict the effects of concomitant treatment, particularly in patients with left ventricular dysfunction or cardiac conduction abnormalities. In healthy volunteers, diltiazem has been shown to increase serum digoxin levels up to 20%.

Carcinogenesis, Mutagenesis, Impairment of Fertility. A 24-month study in rats and a 21-month study in mice showed no evidence of carcinogenicity. There was also no mutagenic response in in vitro bacterial tests. No intrinsic effect on fertility was observed in rats.

Pregnancy. Category C. Reproduction studies have been conducted in mice, rats, and rabbits. Administration of doses ranging from five to ten times greater (on a mg/kg basis) than the daily recommended therapeutic dose has resulted in embryo and fetal lethality. These doses, in some studies, have been reported to cause skeletal abnormalities. In the perinatal/postnatal studies, there was some reduction in early individual pup weights and survival rates. There was an increased incidence of stillbirths at doses of 20 times the human dose or greater.

There are no well-controlled studies in pregnant women; therefore, use CARDIZEM in pregnant women only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers. It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, exercise caution when CARDIZEM is administered to a nursing woman if the drug's benefits are thought to outweigh its potential risks in this situation.

Pediatric Use. Safety and effectiveness in children have not been established.

ADVERSE REACTIONS

Serious adverse reactions have been rare in studies carried out to date, but it should be recognized that patients with impaired ventricular function and cardiac conduction abnormalities have usually been excluded.

In domestic placebo-controlled trials, the incidence of adverse reactions reported during CARDIZEM therapy was not greater than that reported during placebo therapy.

The following represent occurrences observed in clinical studies which can be at least reasonably associated with the pharmacology of calcium influx inhibition. In many cases, the relationship to CARDIZEM has not been established. The most common occurrences, as well as their frequency of presentation, are: edema (2.4%), headache (2.1%), nausea (1.9%), dizziness (1.5%), rash (1.3%), asthenia (1.2%), AV block (1.1%). In addition, the following events were reported infrequently (less than 1%) with the order of presentation corresponding to the relative frequency of occurrence.

Cardiovascular:	Flushing, arrhythmia, hypotension, bradycardia, palpitations, congestive heart failure, syncope.
Nervous System:	Paresthesia, nervousness, somnolence, tremor, insomnia, hallucinations, and amnesia.
Gastrointestinal:	Constipation, dyspepsia, diarrhea, vomiting, mild elevations of alkaline phosphatase, SGOT, SGPT, and LDH.
Dermatologic:	Pruritus, petechiae, urticaria, photosensitivity.
Other:	Polyuria, nocturia.

The following additional experiences have been noted:

A patient with Prinzmetal's angina experiencing episodes of vasospastic angina developed periods of transient asymptomatic asystole approximately five hours after receiving a single 60-mg dose of CARDIZEM.

The following postmarketing events have been reported infrequently in patients receiving CARDIZEM: erythema multiforme; leukopenia; and extreme elevations of alkaline phosphatase, SGOT, SGPT, LDH, and CPK. However, a definitive cause and effect between these events and CARDIZEM therapy is yet to be established.

OVERDOSAGE OR EXAGGERATED RESPONSE

Overdosage experience with oral diltiazem has been limited. Single oral doses of 300 mg of CARDIZEM have been well tolerated by healthy volunteers. In the event of overdosage or exaggerated response, appropriate supportive measures should be employed in addition to gastric lavage. The following measures may be considered:

Bradycardia	Administer atropine (0.60 to 1.0 mg). If there is no response to vagal blockade, administer isoproterenol cautiously.
High-Degree AV Block	Treat as for bradycardia above. Fixed high-degree AV block should be treated with cardiac pacing.
Cardiac Failure	Administer inotropic agents (isoproterenol, dopamine, or dobutamine) and diuretics.
Hypotension	Vasopressors (eg, dopamine or levarterenol bitartrate).

Actual treatment and dosage should depend on the severity of the clinical situation and the judgment and experience of the treating physician.

The oral LD_{50}'s in mice and rats range from 415 to 740 mg/kg and from 560 to 810 mg/kg, respectively. The intravenous LD_{50}'s in these species were 60 and 38 mg/kg, respectively. The oral LD_{50} in dogs is considered to be in excess of 50 mg/kg, while lethality was seen in monkeys at 360 mg/kg. The toxic dose in man is not known, but blood levels in excess of 800 ng/ml have not been associated with toxicity.

DOSAGE AND ADMINISTRATION

Exertional Angina Pectoris Due to Atherosclerotic Coronary Artery Disease or Angina Pectoris at Rest Due to Coronary Artery Spasm. Dosage must be adjusted to each patient's needs. Starting with 30 mg four times daily, before meals and at bedtime, dosage should be increased gradually (given in divided doses three or four times daily) at one- to two-day intervals until optimum response is obtained. Although individual patients may respond to any dosage level, the average optimum dosage range appears to be 180 to 240 mg/day. There are no available data concerning dosage requirements in patients with impaired renal or hepatic function. If the drug must be used in such patients, titration should be carried out with particular caution.

Concomitant Use With Other Antianginal Agents:

1. **Sublingual NTG** may be taken as required to abort acute anginal attacks during CARDIZEM therapy.
2. **Prophylactic Nitrate Therapy** — CARDIZEM may be safely coadministered with short- and long-acting nitrates, but there have been no controlled studies to evaluate the antianginal effectiveness of this combination.
3. **Beta-blockers.** (See WARNINGS and PRECAUTIONS.)

HOW SUPPLIED

Cardizem 30-mg tablets are supplied in bottles of 100 (NDC 0088-1771-47) and in Unit Dose Identification Paks of 100 (NDC 0088-1771-49). Each green tablet is engraved with MARION on one side and 1771 engraved on the other. CARDIZEM 60-mg scored tablets are supplied in bottles of 100 (NDC 0088-1772-47) and in Unit Dose Identification Paks of 100 (NDC 0088-1772-49). Each yellow tablet is engraved with MARION on one side and 1772 on the other.

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These findings suggest that a history of addiction may modify those skills most crucial for everyday adaptation such as new learning and abstracting. . . .

Brain Functioning and Addiction: What Neuropsychologic Studies Reveal

ERNEST L. ROBINSON, PH.D., JAMES S. FITZGERALD, M.A., and KARL GALLEGOS, M.D., *Smyrna**

Abstract

Ninety-five physicians in an inpatient Impaired Health Professionals Program were administered the Halstead-Reitan Neuropsychological Battery and Allied Procedures. A pattern of intact verbal abilities but impaired non-verbal abstracting and problem-solving abilities was present. The particular configuration was not unlike that found in many brain-damaged patients and aging normals. Implications for recovery and rehabilitation were discussed, as was the importance of neuropsychologic assessment as an integral part of any state-of-the-art chemical dependence treatment program.

Introduction

Although the acute neurotoxic effects of alcohol and drug ingestion are well documented and often readily observable, there has been much less agreement among investigators concerning the long-term manifestations of that neurologic impairment in terms of effective cognitive and perceptual functioning. A number of studies have addressed the structural implications of prolonged abuse. For example, Golden et al.[1] have convincingly demonstrated differences in brain densities between chronic alcoholics and normal control patients. Other sophisticated techniques to assess the structural integrity of the brain of addicted patients are adding a plethora of data to the litany of comparative differences.[2]

Given that the brain is the organ of behavior and that the relationship between structure and function in the CNS is far from one-to-one, what can be said about the functional capability of the brain following a history of addiction? Even though we are now able to explore systematically complex brain-behavior relationships dealing with life-adaptation aspects of that neurologic impairment, comprehensive studies are only beginning to appear.[3]

Less than 15 years ago, Parsons[4] described the new and emerging science and clinical specialty of clinical neuropsychology which focuses on the identification and assessment of behavioral changes associated with CNS dysfunction. To map accurately these brain-behavior relationships has profound implications. Answers to questions relating to who is impaired and to what extent are of significance. Other related issues include differential treatment planning, recoverability of function, aftercare expectation (return to professional responsibility, social adaptation, etc.), and other short and long-term predictions. These issues warrant careful consideration and suggest the need to measure brain-behavior relationships in all chemically dependent individuals. Thus, patient evaluation and treatment can encompass what is now known about brain functioning related to problem-solving, memory process, judgment, and new learning. Unfortunately, many

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addicted patients, even those with significant neuropsychologic impairment, often appear normal upon clinical examination (even upon standard neurologic examination), while traditional psychologic testing frequently fails to detect the presence and extent of CNS dysfunction.

In recent years, a number of neuropsychologic tests have been devised for the precise assessment of cerebral dysfunction and its functional, adaptive, and rehabilitative implications. Multiple and multidimensional test batteries such as the Halstead-Reitan Neuropsychological Test Battery (HRB) and Allied Procedures[5] and the Luria Nebraska Neuropsychological Test Battery[6] are much more time-consuming and complex than tests commonly used by psychologists in clinical settings. Yet a number of laboratories and hospitals across the country are obtaining the necessary apparatus and materials. Moreover, psychologists are securing training in neuropathologic processes, brain-behavior relationships, and the type of assessments that employ the necessary inferential methods to enhance qualitative and quantitative interpretive analysis on these data.

Unfortunately, many addicted patients, even those with significant neuropsychologic impairment, often appear normal upon clinical examination. . . .

At Ridgeview Institute, patients in the Impaired Health Professionals Program have been administered the HRB, a multifaceted array of measures which have been shown to be exquisitely sensitive to a variety of normal and impaired brain functions including, but not limited to, auditory, visual, and tactile information processing, reasoning, judgment, concept formation, new learning, mental flexibility, and the ability to profit from reinforcement feedback.

It must be kept in mind that these tests are not substitutes for traditional neurologic diagnostic techniques, particularly since the focus is on the function of the brain, not structure, per se. Yet, they compare favorably with well known neurodiagnostic procedures in terms of lateralization and specification of the neuropathologic processes being investigated.[7] Nor are neuropsychologic tests substitutes for more traditional intelligence tests, since the HRB includes the Weschler Scale as an Allied Procedure.

The neuropsychologic tests . . . allow identification of those individual, subtle changes in the brain-behavior relationships that are not detected by the more traditional methods of assessing organic integrity.

If communication of our finding is to be made clear, a distinction must be made between Type B, or Crystallized Abilities, and Type A, or Fluid Abilities.[8] The former are skills heavily dependent on past learning and are measured by traditional IQ tests. Both overlearned and overpracticed, crystallized abilities reflect vocabulary, general information, and knowledge of arithmetic operations. On the other hand, fluid abilities can be seen as "mental current events" which require the brain to do new things, all in flexible and adaptive ways. Thus, fluid abilities reflect what the brain can do now, not what it has been able to do in the past. This complex state of affairs cannot be reduced to a single number like an IQ. The neuropsychologic battery is a means of assessing both crystallized and fluid abilities and addresses this complexity via multiple methods of inference. The present investigation is the first of its kind with this select sample and is the initial step in a long-range program of research on chemical dependence in general and impaired health professionals in particular.

The Study Population

Ninety-five patients undergoing inpatient treatment for chemical dependence in the Medical Association of Georgia's Impaired Physicians Program were administered the entire HRB and Allied Procedures. Each had undergone detoxification for a minimum of 15 days prior to being tested. The study

period was from January, 1981, through December, 1983.

These physicians demonstrated no signs of neurologic dysfunction on physical examination, and psychologic testing conducted 2 weeks prior to neuropsychologic assessment indicated patterns of good ego-strength. Few patients had a co-existing psychiatric disorder requiring specialized treatment. All patients spoke English, and none were physically handicapped. Weschler Adult Intelligence Scale information is as follows: Verbal IQ 125.7 (S.D. 7.9); Performance IQ 116.9 (S.D. 11.4); and Full Scale IQ 123.2 (S.D. 8.7). Demographic data are presented in Table 1.

TABLE 1 — Demographic Characteristics of 95 Patients, MAG Impaired Physicians Program, January 1981-December 1983

Sex	
Male	**91**
Female	**4**
Age in Years	
Mean	**45.01**
S.D.	**10.38**
Right Handed	**87**
Left Handed	**8**

Procedures Employed

A brief summary of the HRB and several Allied Procedures is given below:

Halstead Category Test: The HCT quantifies the ability to devise efficiently and utilize problem-solving hypotheses and switch cognitive sets when it is determined that old strategies are not appropriate for changing stimulus conditions. Abstractive capacity and mental flexibility are heavily weighted. The patient must devise organizing principles from 208 slides presented serially on a multiple-choice format projection apparatus. Feedback is given for all 208 answers to determine the response to reinforcement feedback. The higher the score (errors), the poorer the performance. This test identifies dysfunction in virtually any cortical area and is the most sensitive neuropsychologic procedure yet devised.

Halstead Tactile Performance Test: Yielding six separate scores, this test provides an index of lateralized performance (left versus right), incidental learning, memory skills, particularly sensitive to dysfunction in the ability to gain experience from those events to which a patient does not specifically attend. The patient, while blindfolded, must place 10 wooden blocks into matching slots on a board tilted 70 degrees. The test is first completed using only the dominant hand, followed by an identical trial with the non-dominant hand, followed by a trial using both hands. Without viewing the board, the patient then proceeds to draw the shape of the board and the various blocks, locating them spatially as the patient envisions them to have been. The longer it takes to place the blocks, the poorer the performance. One score, total time, is an indicator of posterior cortical functioning. Scores are also obtained based upon the ability to remember the shapes involved (incidental memory) and to locate them positionally. Localization scores reflect generalized integrity of the cerebral cortex.

Speech-sounds Perception Test: Consisting of the presentation of 60 nonsense words in multiple choice form, this test measures verbal auditory perception, attentional capacity, and the ability to maintain task performance in the face of subtle distraction (background noise). Generally viewed as a left hemisphere indicator, a high error score suggests dysfunction in the language-dominant hemisphere, even though a poor performance can result from an active lesion regardless of its location in the brain.

Seashore's Test of Rhythm: The patient is presented with 30 pairs of rhythm patterns and is required to determine whether each pair is the same or different. Even though measuring many of the same mental functions as the Speech-Sounds Perception Test, but concentrating upon nonverbal auditory perception, this test has been empirically demonstrated to be more sensitive to dysfunction in the right hemisphere.

Halstead Finger Oscillation Test: This test determines the maximum rates at which a patient can oscillate the index finger by activating the lever arm of a mechanical counter. Each hand is tested separately for five consecutive trials which are then averaged. The results provide data on anterior functioning in each hemisphere.

The Halstead Impairment Index: This index consists of seven scores derived from the above tests and reflects the percentage of those scores which fall into the brain-damaged range. Thus, this composite score can vary from a perfectly normal 0.0 to 1.0 or maximum impairment.

Relationships between the IQs and current adjustment may provide one of the first signs of discrepancies between past accomplishments and current functional capabilities.

In addition, there are four ancillary procedures that heighten accuracy by tapping an additional range of skills that empirical research has shown to be involved in complex brain-behavior relationships. The Weschler Adult Intelligence Scale (WAIS) provides a comprehensive measure of psychometric intelligence consisting of previously learned information and places a patient within the

overall population based upon an extensively standardized sample. The results of this test can be compared to premorbid functioning and to current level of adjustment to determine cognitive efficiency and effectiveness. The WAIS yields a Verbal IQ, Performance IQ, and Full Scale IQ. Verbal skills tend to be more resistant to brain pathology than those spatial/nonverbal abilities tapped by the performance subtests. Relationships between the IQs and current adjustment may provide one of the first signs of discrepancies between past accomplishments and current functional capabilities.

The Trail Making Test: This requires the drawing of a single line connecting 25 numbered circles placed randomly on a page. In part B, the line is drawn between circles based upon an alphanumeric sequence, i.e., 1-A, 2-B, 3-C, etc. The performance is timed and compared with normative data. Part B measures mental flexibility, an attribute often reduced in those neuropsychologically impaired, and is also an additional indicator of generalized cortical integrity.

Finally, the authors have incorporated the Rey Auditory-Verbal Learning Test into the battery since it provides an individual learning curve in addition to crucial information concerning memory, a mental process quite sensitive to compromised cerebral integrity. Indicators are obtained of ability to learn new material, encoding skills, as well as storage and retrieval processes.

Results

Utilizing customary cut-off scores for the HRB tests [1-7] which comprise the Halstead Impairment Index, the Impaired Physicians sample was compared with 50 non-patient controls who had shown no signs of brain damage or addiction. Although these non-physician controls were younger (32.36 years versus 45.01 years), any effects of aging in the physician's sample would be more than compensated for by educational differences (11.58 years versus 20.00 plus years). Unfortunately, no comparable control groups are currently available, particularly since the impaired physicians sample is highly select in terms of IQ, socioeconomic status, educational attainment, and a host of other variables.

For the seven HRB measures on which normative data were available, the Impaired Physicians sample was compared with the controls utilizing standard tests of statistical significance (t-tests for unequal sample sizes). As indicated in Table 2, on three of the seven comparisons, the controls performed significantly better than the Impaired Physicians, while on the remaining four, the two groups did not differ.

Fluid abilities reflect what the brain can do now, not what it has been able to do in the past. The neuropsychologic battery is a means of assessing both crystallized and fluid abilities. . . .

On the Halstead Category Test, the most sensitive measure of cortical integrity, the Impaired Physicians made significantly more errors than the controls ($t = 2.17$, $p < .03$). On a second generalized indicator of functional-cortical status, TPT-Localization, the controls gave more correct object placements ($t = 2.98$, $p < .003$). Then, on TPT-Total Time, an indicator of bilateral posterior tactile/sensory integration, the controls were again superior ($t = 3.24$, $p < .001$). These findings suggest that a history of addiction may modify those skills most crucial for everyday adaptation such as new learning and abstracting, as well as the ability to think in terms of alternatives and options when confronted with novel environmental demands.

Another way of viewing the neuropsychologic performance of the Impaired Physicians is to examine their scores relative to the cut-off values given by Reitan.[9] These cut-offs allow maximum differentiation between normal and brain-damaged populations. Table 3 gives cut-off values, as well as the number and percentage of Impaired Physicians falling into the normal and impaired ranges on each measure.

On the Halstead Impairment Index, almost one-fourth of the sample fell within the range considered

TABLE 2 — Means and Standard Deviations for Controls and Chemically Dependent Physicians on the Halstead Reitan Neuropsychological Battery, MAG Impaired Physicians Program, January 1981-December 1983

Tests	*Controls* (*N* = 50)		*Impaired Physicians* (N = 95)		Significance
	Mean	S.D.	Mean	S.D.	
Category	32.38	12.62	39.08	23.66	P < .03
TPT-time	12.59	5.20	16.48	9.20	P < .001
TPT-memory	7.65	1.41	7.71	1.43	n.s.
TPT-localization	5.29	2.12	4.10	2.42	P < .003
Seashore rhythm	5.20	3.45	4.05	3.06	n.s.
Speech-sounds perception	7.08	5.31	5.91	3.43	n.s.
Finger oscillation	50.74	7.29	54.03	5.96	n.s.

TABLE 3 — Breakdown of Physician-Patient Scores on the Neuropsychologic Battery, MAG Impaired Physicians Program, January 1981-December 1983

Neuropsychologic Test	*Normal Scores* N	%	*Impaired Scores* N	%	*Cut-Off Scores Limits*
Categories (N = 94)	66	70	28	30	> 51
Total Time (N = 93)	51	55	42	45	> 942 Sec.
Memory (N = 93)	86	92	7	8	< 6
Localization (N = 93)	44	47	49	53	< 5
Speech Sounds (N = 95)	67	71	28	29	> 8
Seashore Rhythm (N = 95)	62	65	33	35	> 5
Finger Tapping Dominant Hand (N = 95)	66	69	29	31	< 50
Impairment Index (N = 93)	71	76	22	24	> 0.5
Trailmaking A (N = 95)	70	74	25	26	> 39
Trailmaking B (N = 95)	72	76	23	24	> 89

neuropsychologically impaired. Specifically, this finding means that at least one of every four physicians performed in the brain-damaged range on at least 50% of those neuropsychologic measures. Furthermore, the percentage of physicians showing impairment on any single measure ranged from 8% to 53%.

Are our Impaired Physicians neuropsychologically impaired? It should be clear that the answer must be a qualified yes. Since age, education, and general intelligence play a role in the overall level of neuropsychologic adaptation, the traditional cut-off scores would in all probability be much too liberal for this select population. Thus, further score refinement should increase substantially the percentage of the physician sample falling into the impaired range.

In summary, many physicians who present themselves for inpatient treatment of chemical dependence are mildly to moderately neuropsychologically impaired for their age and educational levels. A pattern of intact verbal abilities, impaired nonverbal abstracting and problem-solving abilities is present, a pattern not unlike that found in many brain-damaged patients and aging normals.

Implications for Rehabilitation

Two major purposes of quantified measurements and empirical research are to increase diagnostic accuracy and improve effective treatment methods. The neuropsychologic tests cited above, based on 3 decades of research, allow identification of those individual, subtle changes in the brain-behavior relationships that are not detected by the more traditional methods of assessing organic integrity. Research suggests that these subtle cognitive changes directly affect the physician's level of adaptation, especially when confronted with new situations and data. Given the rapid, almost explosive, advances in medicine within the last decade, the physician's ability to adapt cognitively to an ever-changing data base would seem to be a particularly critical consideration. The neuropsychologic procedures described above provide quantitative scores that can be compared with normal controls, with similar addicted populations, and with the brain-injured, so that each patient can be thoroughly analyzed as to the extent and degree of compromised cerebral functioning.

It is the more subtle deficits that create the most problems in rehabilitation. . . .

This complex method of psychometric inquiry first detects any cognitive impairments and then aids in the formulation of an individualized treatment plan. There have been many instances in which the patient appeared grossly intact at all levels of clinical analysis but could not seem to "get with the program." A comprehensive neuropsychologic was ordered and in every case, subtle, but very significant dysfunction was documented in those areas most critical for the higher level of adaptation demanded by their professional status. Once dysfunction is documented and analyzed, decisions can be made concerning length and possible benefits of treatment, degree of recoverability, whether supervision should be requested if the physician returns to practice, and a specific time frame for the recovery of dysfunctional cognitive processes. Thus, not only do the data provide an index of current functioning but they also allow for the prediction of future recovery potential.

Most important, this process shapes the expectations of the patient, the attending physician and the staff, thus potentially thwarting an unnecessary relapse by setting up realistic goals for treatment. For example, if the subtle deficits are not identified, both the patient and attending physician may have unrealistic expectations for the patient's performance, progress, and recovery.

Slow progress may be defined as a motivational problem, since the underlying deficits tend to be

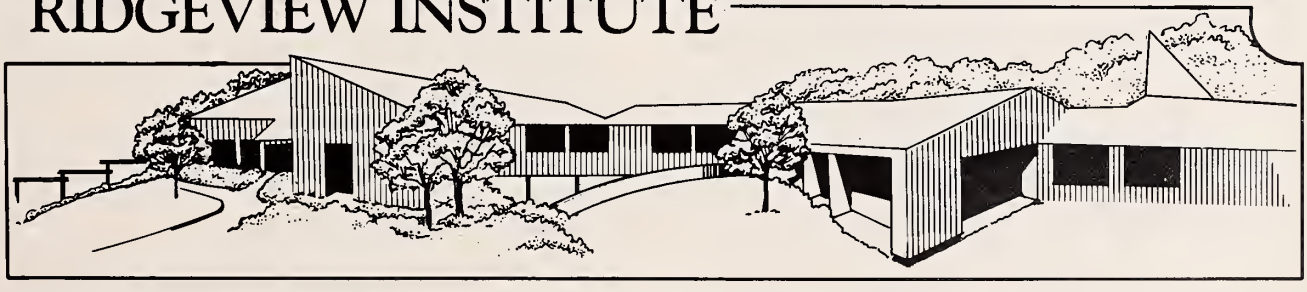
masked by the fact that mental impairment leads to a narrowed range of functioning with a concomitant increase in denial, rigidity, irritability, and contrariness. Combine this scenario with the commonly held belief (or myth) that premorbid mental functioning "should" return to normal soon after the detoxification process, and there is fertile soil for superimposed psychiatric problems. Multiple research studies have shown that significant quantitative changes occur for up to 1 year following sobriety, while more subtle changes continue to occur for up to 2 years.[10] Obviously, the greater the initial impairment, the more dramatic the initial changes, yet the longer the period of recovery. However, it is the more subtle deficits that create the most problems in rehabilitation, since neither the attending physician nor the patient suspects the inherent organic dysfunction, and each ascribes the problem to functional factors and becomes discouraged.

For decades the general public, addicted patients, *and physicians* believed addiction to be the result of a lack of will power or motivation, thereby creating a false issue that impeded rehabilitation. So it is today with regard to subtle cognitive impairment. Unless a patient manifests gross impairment, the assumption is made, though unwarranted, that cognitive function has remained intact and is readily available for the recovery process. This thinking tends to assume, once again, that functional factors are the real culprits if progress fails to follow a predetermined course, particularly with regard to time factors. However, the advent of more sophisticated instrumentation has served to challenge this subjective belief that has obstructed appropriate and proper treatment. Thus, another crucial variable in the addictive process has been identified in the search for more effective means of diagnosing and treating addicted populations.

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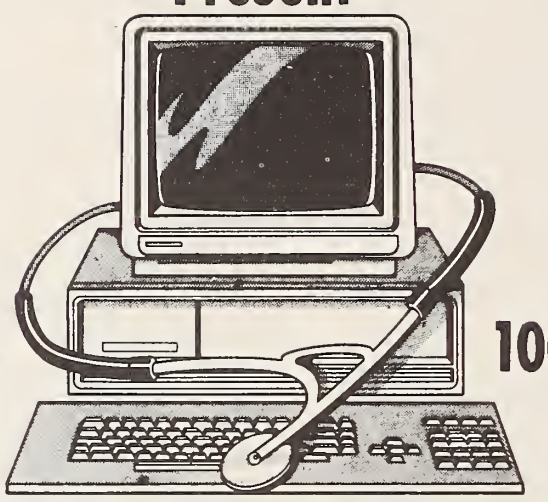
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The results of this study showed that PAs in Georgia do not wish to have unrestricted prescribing authority for all drugs.

Prescriptive Authority: The Physician Assistants' Views

JACK E. FINCHAM, R.PH., PH.D., *Athens**

Introduction

Since the inception of the physician assistant (PA) profession, much has been written about varying aspects of their practice,[1] assigned and delegated tasks,[2] and the quality of care they provide to patients.[3] Discussion of the present and future status of PAs has centered around their scope of practice and constraints limiting their practice. This discussion has included an examination of legal and reimbursement constraints.[4] Weston has noted that the prescribing and dispensing of drugs by nurse practitioners (NPs) and PAs has been very controversial.[5]

There has been both internal and external (to these professions) discussion relating to the prescribing of prescription drugs. Various states have enacted differing regulations regarding non-physician prescriptive authority for prescription drugs. A recent study examined pharmacists, physicians, nurses, and NPs attitudes toward NP prescriptive authority.[6] The results indicated that physicians disagreed for the most part, nurses were supportive (both nurses and NPs), and pharmacists were split in their opinions.

There appears to be a gap in the literature regarding PAs' attitudes toward their own and others' prescriptive authority. To date, there has not been an assessment of PAs concerning this subject.

The purpose of the study described here was to examine the view of Georgia PAs with respect to their attitudes toward PA prescriptive authority (unrestricted for all drugs in general, unrestricted for specific classes of medications, and restricted for all drugs). The attitudes of these PAs toward others (NPs and clinical pharmacists) having unrestricted prescriptive authority for medications were also assessed.

Methodology

A mailed survey instrument was sent via first class mail to all 459 individual PAs listed in the Georgia roster of physician assistant licensees as of November 30, 1983. A postcard reminder (after 1 week) and an additional mailout containing another questionnaire (after 3 weeks) were sent to nonrespondents. The questionnaire was a composite of demographic, work setting, and attitudinal items contained in an 8-page format. The first item on the questionnaire was: "Are you currently practicing as a physician assistant?" If the answer was yes, the person was requested to continue the questionnaire, and if no, to stop and return the questionnaire unanswered.

Results

Eighteen of the questionnaires were undeliverable. Of the remaining 441, 318 responded within 6 weeks, for a response rate of 72.1%. A total of 33 respondents indicated they were not currently practicing as a PA; this left 285. A total of 74.7% of the sample were males; the average length of practice was 6.2 years; 65.6% of the sample practiced in a community with a population greater than 50,000; 42.5% practiced primarily in a hospital setting; and 24.2% practiced with a private solo practice physician.

The results of the attitudinal assessment of PAs regarding unrestricted prescriptive authority for themselves, for NPs, and for clinical pharmacists (PharmDs) is presented in Table 1. The three items

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TABLE 1 — PAs Attitude Toward Unrestricted Prescriptive Authority

Response	For: Physician Assistants Number	Percentage	For: Nurse Practitioners Number	Percentage	For: Pharm D Pharmacists Number	Percentage
Strongly disagree	122	42.8	112	39.3	101	35.4
Disagree	51	17.9	64	22.5	59	20.7
Moderately disagree	35	12.3	19	6.7	27	9.5
Neutral	30	10.5	51	17.9	65	22.8
Moderately agree	22	7.7	26	9.1	20	7.0
Agree	17	6.0	10	3.5	9	3.2
Strongly agree	8	2.8	3	1.1	4	1.4
Totals	285	100 %	285	100 %	285	100 %

presented were: "PAs should be allowed to prescribe for all drugs without a physician's cosignature"; "A Nurse Practitioner should be allowed to prescribe medications without a physician's cosignature"; and "Other practitioners such as a PharmD should be allowed to prescribe medications without a physician's cosignature." The results indicate that PAs moderately to strongly disagree with not only themselves (73.0%) but also with NPs (68.4%) and PharmDs (65.6%) having unrestricted prescriptive authority. Only 16.5% of the PAs moderately to strongly agreed that PAs should have unrestricted prescriptive authority. The totals were less for any response of agreement that NPs (13.7%) and PharmDs (11.6%) should have unrestricted authority.

The response summary of the sample to the item pertaining to restricted prescriptive authority is presented in Table 2. The view of PAs having authority to prescribe for a limited number of drugs only was much more positive. A total of 76.9% of the sample moderately to strongly agreed with PAs having prescriptive authority for a limited number of drugs. A total of 37.2% of the sample strongly agreed with this limited prescriptive authority.

Nine categories of drugs were presented. The respondents were asked to indicate their feelings pertaining to PAs having the ability to prescribe for the drug categories independent of a physician, without a cosignature. The results indicate that the respondents agreed most strongly that they should have independent prescriptive authority for antihistamines and decongestants and least strongly for psychotropics (Table 3). The following is the listing of drug categories in descending order of agreement regarding PAs having unrestricted prescriptive authority for the drug category: antihistamines, decongestants; analgesics, nonsteroidal anti-inflammatory agents; antibiotics; immunizations; contraceptive devices and pills; antihypertensive/diuretics; oral hypoglycemics/insulin; antianginal/antiarrhythmics; and psychotropics.

The items asked of the sample regarding the specific drug categories were presented such that the respondent circled a number from 1 to 7 corresponding to answers from strongly disagree to strongly agree. The mean score and standard deviation for each category is presented in Table 4. The mean score across all categories of the drugs presented was 4.90, which corresponded to the answer of moderately agree.

TABLE 2 — PAs View of Restricted Prescriptive Authority for PAs

Response	Number	Percentage
Strongly disagree	17	6.0
Disagree	13	4.6
Moderately disagree	14	4.9
Neutral	22	7.7
Moderately agree	41	14.4
Agree	75	25.3
Strongly agree	106	37.2
Total	285	100 %

The value of Pearson's-*r* correlation between the sample scores for the items corresponding to the types of prescriptive authority, unrestricted (mean = 2.52) and restricted (mean = 5.45) was equal to − 0.157 (p = .008). Paired *t*-test analysis of the sample responses to their view toward restricted and unrestricted prescribing yielded a *t* value equal to − 18.35 (degrees of freedom, 284), two-tailed probability equal to $p < .0001$.

Discussion

Caution should perhaps be advised in extrapolating the results of this study to all PAs in all states. Since the laws regulating the prescribing of drugs vary tremendously from state to state, the sample was purposely limited to one state where PAs have dependent prescriptive authority. This was done to allow for homogeneity of practice limitations, regulations, and practice opportunities. The liberal nature of different state regulations related to prescriptive authority certainly could temper attitudes toward independent prescribing in other samples of PAs. Nonetheless, the benefits of the sample homogeneity allowing for enhanced generalization may outweigh any drawbacks.

TABLE 3 — PAs Views Toward Unrestricted Prescriptive Authority for Selected Therapeutic Categories of Drugs

Class of Drugs	*Strongly Disagree*	*Disagree*	*Moderately Disagree*	*Neutral*	*Moderately Agree*	*Agree*	*Strongly Agree*
Antihistamines	3.9%(11)*	0.7%(2)	1.8%(5)	7.4%(21)	10.5%(30)	24.6%(70)	51.2%(146)
Analgesics/NSAID	6.6%(17)	3.2%(9)	2.5%(7)	6.3%(18)	14.0%(40)	25.6%(73)	42.5%(121)
Oral Hypoglycemic/ insulin	9.5%(27)	7.0%(20)	10.2%(29)	22.5%(64)	18.6%(53)	15.1%(43)	17.2%(49)
Antianginal/ antiarrhythmics	13.3%(38)	15.4%(44)	13.7%(39)	17.9%(51)	14.7%(42)	13.0%(37)	11.9%(34)
Psychotropics	19.6%(56)	18.9%(54)	15.4%(44)	22.5%(64)	10.9%(31)	9.1%(26)	3.5%(10)
Antibiotics	5.6%(16)	3.2%(90)	4.2%(12)	10.2%(29)	15.4%(44)	26.0%(74)	35.4%(101)
Antihypertensives/diuretics	8.8%(25)	6.0%(17)	8.1%(23)	14.0%(40)	19.6%(56)	20.7%(59)	22.8%(65)
Contraceptives	8.8%(25)	5.3%(15)	5.6%(16)	14.7%(42)	15.1%(43)	21.1%(60)	29.5%(84)
Immunizations	7.0%(20)	2.1%(6)	4.2%(12)	13.0%(37)	14.0%(40)	23.2%(66)	36.5%(104)

* Number in parenthesis is the number of respondents with this response, percentage refers to percent of total with this response.

TABLE 4 — Average Sample Score for Nine Specific Categories of Drugs

Category	*Mean*	*Standard Deviation*
Antihistamines/decongestants	5.99	1.47
Analgesics/NSAID	5.66	1.71
Antibiotics	5.46	1.71
Immunizations	5.40	1.78
Contraceptive devices/pills	5.03	1.91
Antihypertensives/diuretics	4.83	1.87
Oral hypoglycemics/insulin	4.48	1.83
Antianginal/antiarrhythmics	3.92	1.92
Psychotropics	3.27	1.72
Average across all above categories	4.90	1.42

The results of this study showed that PAs in Georgia do not wish to have unrestricted prescribing authority for all drugs. Those responding, on the average, also did not feel that NPs or PharmDs should have unrestricted prescriptive authority. They did feel they should have limited prescribing authority for drugs, and felt less agreement for unrestricted prescribing for drug categories that require perhaps a certain expertise (psychotropics) or specialized training and knowledge (antianginal/antiarrhythmics). The results of the *t*-test comparison between the sample responses to views toward restricted and unrestricted prescribing authority indicate the PAs viewed these differing types of prescribing in a vastly different vein. PAs in Georgia have restricted prescriptive authority. The responses in this survey would seem to indicate that on the average that is all the authority they want.

The results of the study reported here should indicate to policy makers, health care system analysts, and other professions and professionals that physician assistants perhaps recognize the limits of their practice with regard to prescriptive authorization. Furthermore, dialogue should be continued between and among the prescribing and dispensing professions so as to allow for enhanced communication on points of interest and concern to all involved in the delivery of health care.

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Guidelines are listed to help assure that an essential minimum of pertinent information and evidence is recognized, acquired, preserved, and transmitted to the proper authorities.

Hanging in the Balance: The Scales of Justice and Forensic Evidence

RANDY L. HANZLICK, M.D., *Atlanta**

MEDICAL EXAMINERS and coroners throughout the United States, in general, have routine "procedures of the trade" regarding the handling and processing of blood, clothing, specimens, and evidence pertaining to victims of violent death. Such routine procedures, however, are frequently "interrupted" when victims of violence remain alive, are transferred to hospitals, subjected to diagnostic and/or therapeutic procedures, and subsequently die.

In the haste (and understandable preoccupation with conservation of life), emergency technicians, paramedical personnel, nurses, emergency room physicians, and surgeons sometimes lose sight of the importance of evidence preservation. Evidence which may be crucial to medico-legal death investigation is sometimes lost, discarded, or simply not obtained.

For evidence to be of value, it must first be *recognized* by someone to constitute potential evidence. Then, the evidence must be *acquired,* properly *preserved,* and properly *transmitted* to the appropriate authorities.[1]

The duties of medical examiners and coroners, by definition, generally do not commence until death occurs. And, to the medical examiner's disadvantage, the decedent's agonal period may be prolonged, imposing a time-dependent drawback in trying to reconstruct the events which led to death. The following guidelines are offered to all medical personnel involved in the management of living victims of violence, with the hope that those who die from violence will be better served.

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Guidelines for Obtaining and Preserving Forensic Evidence

1. Victims of violence include all persons who are victims of accidents, attempted homicide, attempted suicide, assault, or any type of trauma (chemical or physical) which creates a likelihood that the patient's morbidity is not due solely to natural causes.

2. In all cases, medical personnel should make every attempt to comply with requests made by law enforcement officers investigating the case. This cooperation should be in addition to, not in place of, these guidelines.

3. In all suspected victims of violence, clothing should be removed in such a manner that pre-existing defects (such as cuts, tears, bullet holes) are not altered, and in such a manner that the clothing may be reconstructed (i.e., create as few "pieces" as possible). Shoes can be of great value in traffic victims, for the soles may bear imprints of the gas pedal, brake pedal, floor mat, or ground (in pedestrians) which may help in accident reconstruction. If possible, clothing should be allowed to air dry. Definitely, clothing should be placed in a clean *paper* bag (plastic promotes moisture retention and decomposition), sealed, and labelled with the victim's name, date, and person's name who processed the clothing. Such packages should be stored with the security office until disposition of the victim is known (death or recovery).

4. At the minimum, a tube of blood, and if possible, at least 10cc of urine and other available fluids (gastric contents, etc.), obtained as soon as possible following admission, should be taken to and stored in the laboratory until the vic-

tim's disposition is known. These specimens should not be used by the hospital. The Medical Examiner Act of Rhode Island requires that the hospital draw a tube of blood on all trauma victims for such purposes.[2] Such specimens may be invaluable at a later date for toxicologic testing and typing.

5. All personal effects and evidence that arrive with the body (broken glass, debris, etc.) should be bagged and labelled and stored with the security office.

Incomplete or absent forensic evidence often precludes the successful investigation and resolution of violent crimes.

6. All foreign objects or foreign bodies (such as knives and bullets) removed from patients should be handled as little as possible, not cleaned, allowed to dry, preserved in an unfixed state, placed in a container, and transferred to the pathology department. Projectiles such as bullets and other metal or deformable ofjects should not be handled with metal appliances such as forceps unless absolutely necessary. Ballistic markings and tool marks used to identify the source or nature of such objects may be destroyed. If the foreign bodies are tissues, half should be refrigerated or frozen, and half should be fixed in formalin.

7. The material and tissue obtained from a debrided wound, including items such as gauze or cotton used to cleanse such wounds, should be fixed in formalin and forwarded to pathology. Such items and debris may contain gunshot residue or evidence transferred from a weapon or injurious agent which can be traced to a source or characterized. Shaved hair (particularly near gunshot wounds) should be saved, not washed, and kept in dry storage. Hairs may bear gunshot residue which may be crucial in determining range of fire (distance from gun to victim). Electrocution may cause hair to be singed or pitted.

8. Do not wash the hands of gunshot wound victims. Doing so may preclude analysis for gunshot residue which may help determine if a victim handled a firearm.

9. Specifically, local collections of blood and clot (hematomas) which are evacuated should be divided; one half should be fixed in formalin, and the other half should be refrigerated. Both should be forwarded to pathology. This may enable histologic and toxicologic evaluation which may be quite useful in timing (dating) of injuries and assessment of the victim's toxicologic status nearer the time of the injury.[3]

10. Pathology departments and laboratories should refrigerate all unfixed tissue specimens. Pathology departments should also maintain a special storage area for forensic specimens. And, pathology departments should "log in" all forensic specimens just as if they were surgical specimens. This will provide a record of receipt.

11. In the event of death, all diagnostic and therapeutic appliances should be left in place (IVs, chest tubes, etc.) to help clarify autopsy findings.

Shaved hair (particularly near gunshot wounds) should be saved, not washed, and kept in dry storage. Clothing should be saved in a clean* paper *bag.

12. In the event of death, a copy of the decedent's hospital chart, or at the minimum, a copy of the decedent's hospital course summary should be transferred with the body to the medical examiner or coroner. Specifically, the record should clearly describe the decedent's original injuries (location, size, and nature), and also summarize iatrogenic injuries which are known to have occurred (type of surgery, chest tubes, etc.). There is often very little difference between the appearance of a fatal stab wound and a therapeutic thoracotomy defect, and often, they are side by side.

13. If possible, 1:1 photographs of external wounds should be made, particularly if the victim

survives more than 1-2 days, but the risk of death still exists. A person who has been beaten may die after his or her bruises have resolved and lacerations have healed. Photographs may document patterned injuries which can be of great importance in forensic investigations.

14. Specimens should be kept at least 30 days following death or discharge.

15. In the author's opinion, it is not necessary to go beyond the usual practice of identifying specimens with the patient's name, ID number, and the source as long as the specimens remain in the institution and can be accounted for. However, emergency rooms, pathology departments, and security offices should have standard release forms which can be used to document the transfer of specimens (and evidence) to outside agencies.

Case Reports

The above guidelines were formulated based on the author's experience with specific cases in which the lack of such guidelines, and hence, the lack of such procedures, made case analysis difficult or impossible. At first glance, the above guidelines may seem excessive or cumbersome, but in any given case, only a few will be applicable. The following cases serve to illustrate the pitfalls of not creating and adhering to such guidelines.

Case 1

A 30-year-old woman was watching a basketball game at a gymnasium. She was fully clothed, sitting in the bleachers. A loud "bang" occurred, and the lady collapsed. She was noted to have an apparent bullet wound and was rushed to a local hospital.

During emergency treatment, the clothing was removed, discarded, and incinerated. The patient died.

Photographs taken by a photographer at the basketball game clearly showed the victim, as well as others, sitting in the bleachers moments before the gunshot. The photos were used to identify potential suspects.

Because the clothing was discarded, it was impossible to determine if the gunshot was from a close or distant range. Gunshot residue, which might be expected on the clothing in a close range shot, could not be evaluated. The value of the scene photographs was minimal since it could not be determined if the shot was fired close to or far away from the victim.

Case 2

A 45-year-old man was admitted to the hospital with blunt head trauma. He indicated he had been beaten by his girlfriend and another man, after getting drunk with them. He remained relatively stable for several days, then developed progressive renal failure, which after months of hospitalization and numerous complications, culminated in death.

The original injuries were not well documented and had healed. Furthermore, during his hospitalization, suspects were apprehended who confessed to poisoning the man with some unknown agent in a cocktail. Original blood specimens had been discarded and enough time had elapsed that toxicologic analysis of blood and tissues was uninformative. The cause of death (and the renal failure) could not be fully determined.

Case 3

A man was stabbed in the left thorax. Nearby, two thoracotomies were done. Thus, there were 3 "stab wounds" to the left lateral chest: one mid axillary, one anterior axillary, and one posterior axillary. The man died.

At trial, the location of the fatal wound was critical to the strategy of the defense. The hospital chart contained conflicting statements as to the location of the original stab wound, and the memories of the physicians involved contradicted some points in the record.

Such confusion made prosecution by the District Attorney quite difficult.

Case 4

A 26-year-old man was found in a parking lot, unconscious but alive, with a gunshot wound to the right parietal area. He was taken to the hospital, where the hair surrounding the gunshot was shaved for surgical access. The hair was not saved.

The victim died. His hair was quite thick and bushy. Because the hair surrounding the gunshot wound was not saved, it could not be evaluated for burning, singeing, or gunshot residue (smoke, soot, etc.). Thus, the distance between the victim and the gun at the time of the shooting could not be established. This made confirmation or disproval of the alleged perpetrator's statement impossible.

Case 5

In a certain trial, it was important to establish whether or not a homicide victim, who had been beaten and died several days following the incident, was severely intoxicated at the time of the assault (which may have rendered him defenseless). No toxicology was performed on his admission to the hospital.

At surgery, a large epidural hematoma was found, evacuated, and discarded. The patient died.

Had the epidural hematoma been saved, an alcohol determination may have enabled some assessment of the victim's blood ethanol status at the time the bleeding occurred (i.e., shortly after the beating). Disposal of the specimen precluded such investigation.

TABLE 1 — Summary of Guidelines for Handling Forensic Specimens*

Specimen	*Common Examples*	*Processing*
Clothing	Shirt with bullet holes Underwear with semen Shoe with break pedal imprint on sole	Allow to air dry Store in paper bag Do not clean off adherent debri Avoid altering previous defects (tears, holes) Label bag with person's name that processed clothing Store in Security Office
Body Fluids	Whole Blood (at least 7cc) Urine (at least 10cc) Gastric Content	Label "Forensic Specimen" Label "Do Not Use" Obtain as soon as possible after admission Send to laboratory Refrigerate specimens Keep for 30 days
Debri with Body Personal Effects	Automobile glass chips Automobile paint chips Synthetic debri (plastic) Wood splinters etc.	Store in dry container Do not wash or clean Store in security office
Foreign Bodies	Bullets/fragments Shotgun wadding/pellets Knives	Handle as little as possible Do not clean Do not handle with instruments that could scratch or deform specimen Submit specimen to pathology like a surgical specimen
Debrided Tissue Associated Cleaning Agents (Gauze etc.)	Excised gunshot wounds Repaired lacerations Gauze used to clean skin around gunshot wound	Fix in formalin Submit to pathology as a surgical specimen
Hair	Shaved head hair around gunshot wound	Do not wash or clean Store in dry container Submit specimen to pathology as a surgical surgical specimen
Hands	Hands of gunshot victim	Do not wash hands until police agency has had opportunity to test for gunshot residue
Hematomas	Subdural hematoma Epidural hematoma Intra-thoracic clot	Fix ½ in formalin Refrigerate ½ (seal) Submit to pathology as a surgical specimen
Patterned Injuries	Linear contusion from blow with a pipe Imprint of headlight on thigh	1:1 photographs Include photos in record Include patient name in photo

* Note: All specimens should be labelled as "Forensic Specimen" and should include the patient's name, ID #, date, and time.

Conclusion

There are numerous additional points which could be mentioned concerning procedural guidelines in potential forensic cases. For instance, it may be of value to note whether a victim's fingernails are long, and whether there is "foreign tissue" beneath them, which would suggest that a perpetrator may have incriminating scratch-type injuries. However, it is the purpose of this article to list only basic guidelines which will help assure that at least an essential minimum of pertinent information and evidence is recognized, acquired, preserved, and transmitted to the proper authorities.

It should be emphasized that persons involved with potential forensic cases should feel free to contact their local medical examiner, coroner, the Georgia State Crime Laboratory, or the Fulton County Medical Examiner's Office concerning any questions which may arise pertaining to medico-legal investigation. There must be a working relationship between the patient's physician, the pathology department, the laboratory, security, and the medical examiner if smooth and efficient collection and transferral of evidence is to be accomplished.

It is the author's hope that through these guidelines, the living and the dead will be better served by the medical and criminal justice sectors of society.

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A look at some of the myths and facts surrounding the issue of the nutritional needs of athletes.

Nutrition for Athletes

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Introduction

SUPERSTITION, POVERTY, and the trend toward fast food meals are common problems faced by those trying to plan adequate nutrition for our athletes. Superstitutions and pseudo-scientific attitudes of athletes and coaches toward food is obvious to those who observe swimmers sucking on honey bottles before races, others consuming large dosages of gelatin, weight lifters downing protein supplements, and football players devouring steaks and multivitamins. Another segment of our young athletes comes from poverty backgrounds and may not have enough food to meet their nutritional needs. More than 15 percent of the young people in the United States live in poverty, and 20 percent live in one parent homes. More than 50 percent of the mothers work outside the homes. Moreover, with changing lifestyles, there has been a dramatic increase in fast food consumption. As commitments to activities away from the home increase, time for meal preparation at home decreases. These factors enhance the appeal of the convenient "fast foods." It is generally agreed that the best diet for athletes is a balanced diet, with protein supplying about 15 percent of the calories, fats 30 to 35 percent, and carbohydrates 50 to 55 percent. Fast foods tend to supply about 33 to 66 percent of the total daily calories for many of our young adults. These foods are usually high in sodium and fat content (fat content being almost 51 percent of the total calories available in these foods). Carbohydrate content is hard to determine.

The Athlete's Nutritional Needs

The basic nutritional needs of the athlete during training do not vary for different sports nor do they vary from the basic nutritional needs of a sedentary individual except for quantity. During training, some 6000 calories may be necessary for the athlete to remain in a balanced state, compared to a sedentary individual who needs only about 2500 calories. Hence, the effect of a deficiency in diet is much more marked in the athlete. He must, therefore, adhere to a good basic dietary regimen, as dietary deficiencies in excess can impair his performance.

The quantity of the ideal training diet is determined by the need to maintain an efficient body weight and by the increased energy requirements of training.

The quantity of the ideal training diet is determined by: (1) the need to maintain an efficient body weight and (2) by the increased energy requirements of training. Increasing body weight to increase sports performance is a common concern in many of our young male athletes. Young men must recognize that playing potential in any sport increases, only if there is an increase in lean body mass (i.e., muscle) not if there is merely an increase in total body weight. These aspiring young athletes must appreciate that only muscle work, combined with an adequate diet, will increase muscle mass — a fact that must be emphasized repeatedly. No specific nutrient, no vitamin, no specific food, and, in particular, no drug alone will increase muscle mass. Adding excess calories without coupling them to an adequate workout program will generally only result in accumulations of excess body fat. To assess an athlete's excess weight, one can measure the percent of body fat by using calipers to measure the thickness of skin folds which represent the quantity of subcutaneous fat. Probably the most easily measured

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skin fold is that over the tricep muscle. A skin fold of less than 8 mm. in thickness indicates a lean body build, 8 to 15 mm. is acceptable and greater than 15 mm. is "over fat."

In the overweight athlete, it should be realized that body fat is reduced effectively and safely at a rate of no more than about 2 to 3 pounds each week by creating a negative energy balance equivalent to approximately 1000 to 1500 kilocals each day. This energy deficiency must be created while picking a diet of no less than 2000 kilocals each day with the four basic food groups being represented. One to two hours of pre-season conditioning activities will usually expend sufficient energy to create a necessary energy deficit while the athlete eats a 2000 kilocal basic diet. The temptation to restrict energy intact to a severe "reducing diet" must be resisted. Energy intakes restricted to a 1000 kilocals or less will result in utilization of lean body mass, that is, muscle as an energy sourse and, thus, loss of strength and endurance will result. The young athlete who wants to lose 8 to 10 pounds of body fat must begin his program in mid July to achieve competing weight for his athletic season in September.

Many of the electrolyte beverages may actually discourage an intake of needed water because they induce a feeling of satiation.

During the weeks of pre-season fat reduction, periodic evaluations of the rate of fat and weight loss with adequate skin-fat fold measurements and documentation of body weight are advisable.

Nutrition Substance Categories

Basically there are six categories of substances that we are concerned with in diet: water, fats, carbohydrates, protein, vitamins, and minerals.

Water

Maintaining an optimal content of body water is essential for optimum athletic performance. The athlete can be assured that desired levels of hydration are maintained during periods of training in competition by recording body weight at frequent intervals. Any changes in body weight that occur in relatively short periods of time, that is, a few hours a day, will of necessity be due to changes in body water content. Losses of as little as 2 to 3 percent of total body weight in body water will result in measurable increases in body temperature before and after strenuous training sessions. During these strenuous periods, athletes must remember to drink enough water to maintain a constant competing weight. Perspiring athletes are keenly aware of the electrolyte losses, as well as water losses that occur during vigorous exercises; thus, they are vulnerable to the promotion of a host of salt and electrolyte supplements, tablets, beverages, powders, and special foods alleged to be needed to replenish sweat losses and satisfy a particular need. These products are useless at best and may even be dangerous. Many of the electrolyte beverages may actually discourage an intake of needed water because they induce a feeling of satiation. High glucose containing solutions can decrease absorption of much needed water from the gastrointestinal tract.

As the athlete becomes more conditioned, his sweat contains a higher water-to-electrolyte ratio in comparison with other body fluids. Plain, cold water is the ideal beverage for athletes. It should be clean and abundantly available in large disposable cups. Water is most readily ingested and best absorbed when served at cooled temperatures.

Fats

Fat is the most concentrated source of energy reserve and produces twice as many calories per gram as do carbohydrates or protein. The problem is that it releases this energy quite slowly. In sports of light energy expenditure, interspersed with periods of rest, diets dominant in fat or carbohydrates do equally well. In athletes and activities of a strenuous nature unrelieved by rest, carbohydrate meals seem to be best.

Carbohydrates

The optimal range of carbohydrate apportionment

in a person's total daily caloric need has never been scientifically established, but current opinion recommends about 50 percent carbohydrate allowance for total energy requirement. Carbohydrates are more swiftly metabolized to energy by the body than is fat, although carbohydrates yield only half as many calories per gram as fat. There is a 10 percent higher caloric output when a given amount of oxygen is used to burn carbohydrate than when used to burn fat or protein. Under certain competitive conditions, this difference can be advantageous. Athletes on high carbohydrate diets performing sports of endurance and prolonged activities show a slightly increased efficiency as compared to those on high fat diets. Although there is no proof that exercises of short duration, such as the 100 yard dash, are benefitted by carbohydrate pre-game meals, many nutritionists and coaches will still recommend a high carbohydrate meal preceding the event. Carbohydrate reserves may be augmented by offering a high carbohydrate meal, particularly complex carbohydrates such as pasta or cereals, immediately preceding the event. There has been interest in glycogen-loading diets, particularly in endurance sports. It is hard to document that the glycogen-loading regimen significantly improves endurance during competition, but it is well known that it may be potentially harmful, particularly for a cardiac rehabilitation type runner with increased glycogen storage in the cardiac musculature.

Protein

Coaches have traditionally stressed the need for consuming large amounts of meat, especially beef, in the mistaken belief that it replaces muscle protein losses, resulting from heavy muscular activity in the athlete. (Steak plays an honored role in these diets; refuted scientifically many times, the practice still continues.) Actually, the protein needs of the body are governed by its rate of growth, rather than its activities. Therefore, additional protein sources, such as milk, eggs, meat, fish, and cheese, are indicated only for growing boys, such as high school athletes, and for athletes who are making muscle mass. A well-balanced diet that includes the protein intake of 10 to 15 percent of the total daily caloric needs should supply the protein sufficient for growth, defense mechanism, tissue repair, and maintenance.

Vitamins

Vitamins are neither body building nor energy giving, but are key nutrients in that they are important links in metabolism. They are involved in normal growth, resistance to infection, health, and well-being. The ''pill'' most commonly used by athletes is a vitamin tablet. Nutrition supplements are a multi-million dollar business, and athletes are particularly susceptible to the exaggerated health claims of manufacturers. There is no scientific evidence that athletic training in competition increases the needs for any essential nutrients, including vitamins. Although there have been numerous reports in the lay literaturre that vitamins either improve athletic performance or are used up in athletic competition, there are no scientific data to support these claims. Healthy, active individuals, eating a varied diet in adequate amounts to meet the energy needs of an active athlete, will include sufficient vitamins. On the contrary, excessive use of vitamins, particularly Vitamins A and D, can lead to serious toxicity.

Minerals

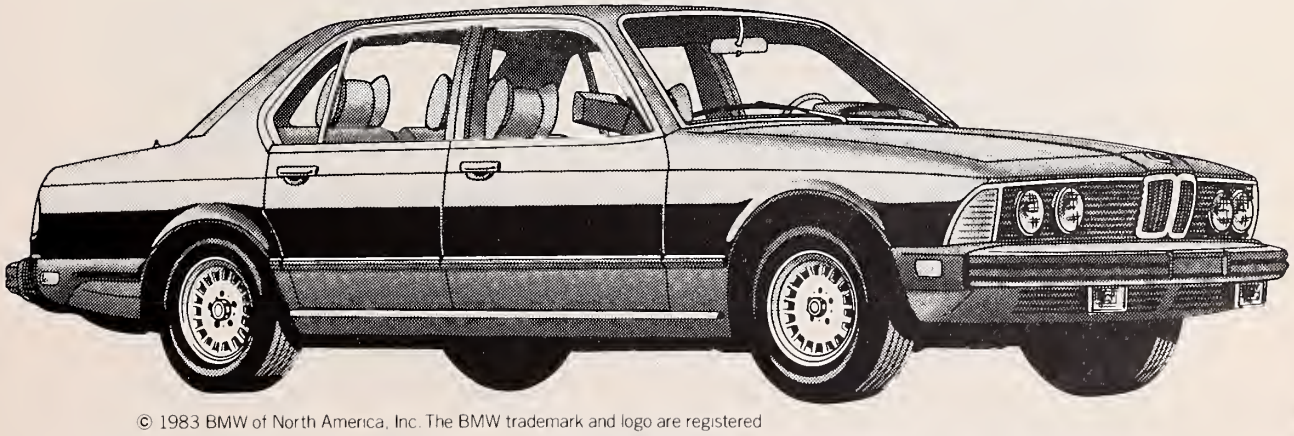
Many minerals are required for optimal nutrition. These are interrelated and kept in balance with each other in carrying out certain body functions. The role of calcium in the formation of bones and teeth is commonly known. Sodium and potassium are of particular interest, and it is well known that sodium chloride is excreted in perspiration, and that salt requirements are increased when an athlete is performing in excessively hot or humid weather. Under conditions of excessive sweating or extreme heat, as many as 5 to 10 pounds of body weight may be lost by an athlete in a single workout. This loss, of course, is largely water. During these periods, increased salting of food should be all that is necessary to meet these needs. A diet sufficient in quantity to provide for the energy needs of an active athlete provides an abundance of all the salts, minerals, and electrolytes that may be lost in sweat of the most vigorously training athlete.

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1985 — A Year For Optimism About Heart Disease

Sometimes, in an effort to help resolve a few residual problems, we have focused on the more negative aspects of cardiovascular disease. Examples would include the occurrence of a heart attack every 20 seconds in the United States, a cardiovascular death every minute, or an image of high blood pressure as a dark and dreary "silent killer" waiting to pounce upon us with a disabling stroke or fatal cerebral hemorrhage. In fact, we should pause a moment to accept congratulations for the tremendous progress that has occurred in cardiovascular disease over the past 2 decades in this nation and in Georgia.[1, 2] Moreover, we cannot project anything but optimism for an even healthier heart for our next generation.

Since 1968, there has been a 30-32% decline in the national death rate from cardiovascular and coronary heart disease. There has been a 42% reduction in the mortality from stroke. These declines in the mortality from coronary heart disease and stroke have been the most successful in the world, followed to a lesser degree by other progressive countries such as Australia, Canada, and Japan.

Rheumatic heart disease has become a thing of the past. Patients with disabling angina pectoris may now be restored to "business as usual" by coronary artery bypass surgery or balloon angioplasty. Cardiac transplantation recipients brag about 10-mile jaunts around Stone Mountain when they couldn't previously walk 500 feet without chest pain and dyspnea. What a change from the 1960s mid-life catastrophe of being branded as a cripple from a heart attack.

The average adult American level of blood cholesterol has fallen from 226 to 211 mg/dl since 1960. Dietary intake of eggs, milk/cream, butter, and saturated animal fats has fallen by 12-39%. Less Americans are smoking and more are exercising regularly. Obesity, smoking, and unrestrained offerings of saturated fats and salty foods are rapidly becoming taboo in public as well as social circles.

Most importantly, our children, the next generation, are evolving in an educated environment about the risk factors for coronary artery disease. They are aware of the benefits of healthy nutrition and exercise programs and of the risks of obesity, high blood pressure, and smoking.

We have good reason to celebrate 1985 as a year of optimism for Heart. Maintenance of cardiovascular health has never been better for the nation, ourselves and our families. Thanks are due to all of the physicians in Georgia, our nurses and support staff, our patients and our children as aware and educated recipients of all of the hard work that has helped create these successful trends.

W. Dallas Hall, M.D.
President, Georgia Affiliate,
American Heart Association

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"State Action" Doctrine as a Defense in Antitrust Challenges

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OVER THE PAST DECADE, health care professionals and institutions have been subjected to an antitrust squeeze play of sorts, which has resulted in a dramatic increase in their potential exposure to antitrust liability. On one side, health care providers have found courts more than willing to apply the antitrust laws to health care activities with the same vigor as those laws are applied to other industries. Essentially, health care providers — like automobile or steel manufacturers, fast-food restaurants or department store owners, magazine publishers, construction contractors, etc. — may be found to be in violation of the antitrust laws if their activities constitute an unreasonable restraint of trade. Thus, physicians may be found guilty of engaging in unlawful price-fixing, such as when they agree on the maximum prices to be charged for rendering health care services;[1] hospitals also may be found to have violated the antitrust laws, such as when they unlawfully restrict access to facilities utilized by hospital-based physicians.[2]

One traditional defense appears to have retained its viability and, in the proper factual setting, still may serve to immunize health care providers against antitrust attack.

At the same time, providers of health care services have found that, when their activities are challenged under the antitrust laws, many of the traditional defenses available to defendants in antitrust claims have been strictly construed by the courts and, as a result, unavailable to health care defendants. Thus, the "business of insurance" defense created by the McCarran-Ferguson Act — which, generally, provides that activities constituting the "business of insurance" are exempt from antitrust attack, with certain limited exceptions — has been significantly curtailed as a viable defense to health care providers in defending antitrust challenges to numerous types of health care arrangements.[3] Similarly, courts have interpreted the "interstate commerce" jurisdictional requirement under the Sherman Act — which, in theory, is intended to limit the applicability of the Sherman Act only to those restraints which occur in or have a substantial adverse impact on interstate commerce — in an expansive manner, such that few health care challenges have been dismissed for a failure to satisfy the interstate commerce requirement.[4]

* Prepared at the request of the Medical Association of Georgia. Mr. Berg is a partner in the firm of Powell, Goldstein, Frazer & Murphy, General Counsel to the Association, 1100 C & S National Bank Building, Atlanta, GA 30335.

Despite this expansion of antitrust regulation over the activities of health care providers and the reduction in the availability of traditional defenses to antitrust claims, one traditional defense appears to have retained its viability and, in the proper factual setting, still may serve to immunize the conduct of health care providers which might otherwise be subject to antitrust attack. This defense, which is known as the "state action" doctrine, is the subject of this month's Legal Page.

The "State Action" Doctrine

The "state action" doctrine originated in 1943, when the United States Supreme Court held that a state-imposed program for the marketing of raisins — a program which indisputably was intended to restrict competition and maintain prices in the distribution of raisins — was shielded from antitrust attack, because the antitrust laws were not designed to restrain a state or its officers or agents from activities directed by its legislature.[5] Since that time, the "state action" doctrine has evolved through numerous judicial interpretations and refinements, such that, in its present form, the "state action" doctrine will be applied to immunize activities from antitrust attack if and only if: (1) The activities are a result of a clearly articulated and affirmatively expressed state policy, and (2) the state policy (and, as a result, the challenged activities) are actively supervised by the state itself.[6]

Recently, the United States Court of Appeals for the Seventh Circuit was required to apply the "state action" doctrine in an antitrust challenge to certain peer review activities.[7] In that case, an orthopedic surgeon had his clinical privileges revoked by the Board of Directors of a hospital, as a result of the recommendations of both an internal hospital peer review committee and an outside, independent peer review organization. The physician then brought suit against the hospital, its Board of Directors, the members of the in-hospital peer review committee, and the outside peer review organization, alleging, among other things, that the defendants had conspired to monopolize the market for orthopedic procedures in the area. The defendants contended, among other things, that their activities were sheltered from antitrust attack under the "state action" doctrine, and ultimately the Seventh Circuit agreed.

Clearly Articulated and Affirmatively Expressed State Policy

The Seventh Circuit first analyzed the question of whether or not the defendants' activities — conducting audits of the plaintiff's surgical procedures performed at the hospital, requiring mandatory second opinions on certain procedures, monitoring the performance of certain procedures and, finally, determining to revoke the plaintiff's clinical privileges — were undertaken by the defendants pursuant to a "clearly articulated and affirmatively expressed state policy." The Seventh Circuit noted that the state had developed and enacted a comprehensive statutory scheme of medical peer review to protect consumer welfare. Among other things, the state statutory scheme clearly mandated that the governing board of each hospital in the state must be responsible for reviewing the professional practices in the hospital. In order to implement this review process, the statutory scheme further required that hospitals establish peer review committees responsible for evaluating the qualifications of and patient care rendered by professional health care providers. From this, the Seventh Circuit found that "as a necessary and reasonable consequence of this state mandated medical peer review process, hospital staff members must review the medical treatments, diagnostic procedures, and surgical procedures of competing staff members and, when required, recommend the revocation of staff members."[8] Accordingly, the Seventh Circuit found that the first element of the "state action" doctrine had been established by the defendants.

Active Supervision

The Seventh Circuit also found that the second requirement necessary to establish the applicability of the "state action" doctrine — that the challenged activities were actively supervised by the state in accordance with the articulated state policy

— was also satisfied in this case. The Seventh Circuit first noted that, by statute and regulations, state employees (called field inspectors) were empowered to review the confidential minutes of meetings of hospital peer review committees. Additionally, several regulatory boards were charged with responsibility for continually reviewing the operation of hospitals, in connection with the annual hospital license renewal procedures.

Finally, the Seventh Circuit noted that, by statute, the members of hospital and other peer review organizations and committees were granted absolute immunity from civil liability arising out of their peer review activities, to the extent that they acted in good faith. This provision was particularly relevant to the Seventh Circuit, which saw the plaintiff's lawsuit, in actuality, as involving nothing more than a challenge to the motives and actions of the various parties to the peer review process. As such, the plaintiff, in the Court's view, had a "more than adequate forum" to challenge the defendants' conduct and motives in reviewing the plaintiff's surgical procedures and in recommending that his clinical privileges at the hospital be revoked — the plaintiff could institute an action under state law, and to the extent that he could prove the defendants did not act in good faith, the plaintiff would not be precluded by the state statutory grant of immunity to members of peer review committees. As succinctly stated by the Court:

> *Common sense dictates that a cause of action under the Sherman Act is not created every time a lawyer, accountant, or architect is denied partnership status in a national firm, a business executive is fired or denied a promotion by a national corporation, or a physician, surgeon, or specialist has hospital staff privileges denied or revoked. In the instant case, [the plaintiff] is entitled to challenge the defendants' motives and conduct in a hearing before the [hospital] medical staff, a review hearing before the joint conference committee of the hospital, and finally through proceedings in the . . . state court system. Just as a disgruntled state bar applicant who is denied admission to a state bar has no cause of action under the Sherman Act against a state mandated and supervised bar review committee, [the plaintiff] has no cause of action under the Sherman Act against the defendants as participants in the state mandated and supervised medical peer review process.*[9]

Conclusion

As a matter of law, the decision of the Seventh Circuit in the case described above would not be binding on a court sitting in Georgia. Moreover, the analysis involved in applying the "state action" doctrine is quite detailed, and dependent, for the most part, upon the particular state statutes and regulations involved. As a result, it is difficult to tell how a court sitting in Georgia might analyze the same question in a case involving a Georgia physician and hospital.

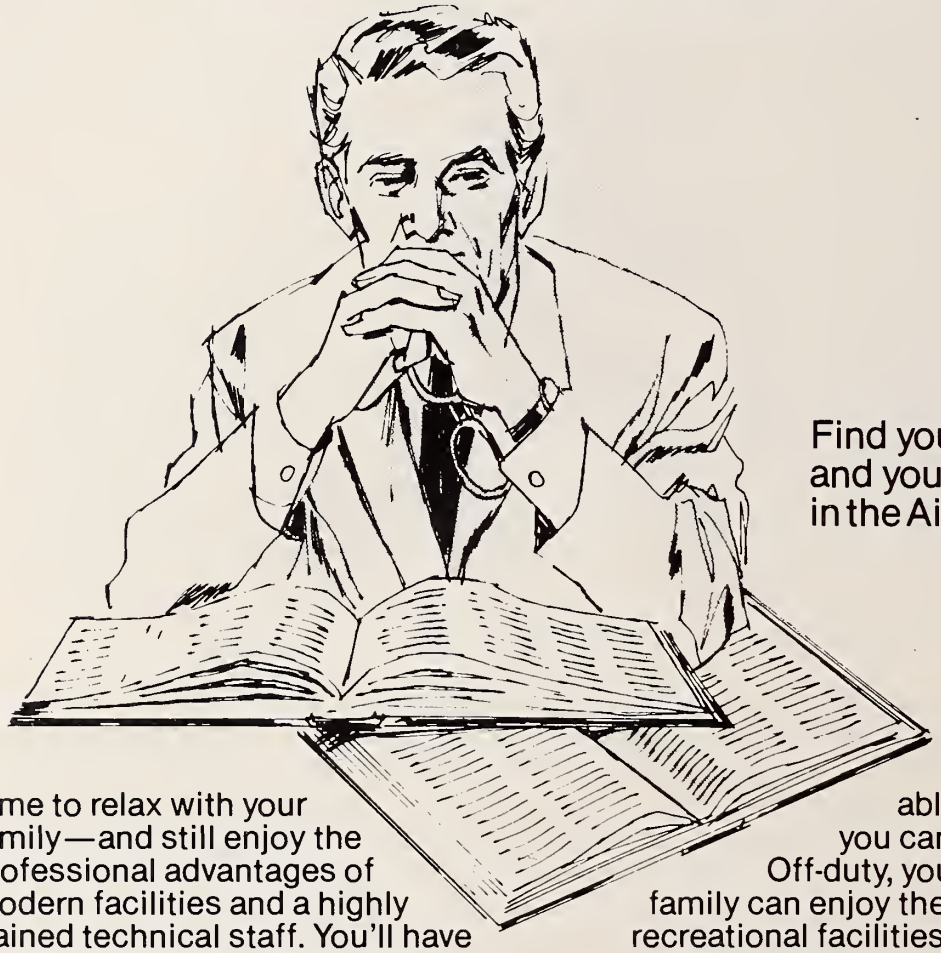
Nonetheless, the present Georgia regulatory scheme involving hospital medical staff decisions and the peer review process appear to be similar in a number of respects to the regulatory scheme and peer review process analyzed by the Seventh Circuit. Accordingly, were a similar case brought in Georgia, the defendants might point to the Seventh Circuit's opinion as strong support for the argument that peer review activities in Georgia are exempt from antitrust attack under the "state action" doctrine.

Notes

1. *See, e.g., Arizona v. Maricopa County Medical Society,* 457 U.S. 332 (1982).
2. *See, e.g., Jefferson Parish Hosp. Dist. No. 2 v. Hyde,* 104 S.Ct. 1551 (1984).
3. *See, e.g., Group Life & Health Insurance Co. v. Royal Drug Co., Inc.,* 440 U.S. 205 (1979); *Union Life Insurance Co. v. Pireno,* 102 S.Ct. 3002 (1982).
4. *See, e.g., McLain v. Real Estate Bd. of New Orleans,* 444 U.S. 232 (1980); *Hospital Building Co. v. Rex Hospital Trustees,* 425 U.S. 738 (1976).
5. *Parker v. Brown,* 317 U.S. 341 (1943).
6. *See, e.g., California Liquor Dealers v. Midcal Aluminum,* 445 U.S. 97 (1980).
7. *Marresse v. Interqual, Inc.,* 1984 C.C.H. Trade Cases ¶66,271 (7th Cir. November 4, 1984).
8. *Id.,* at p. 67,184.
9. *Id.,* at p. 67,188.

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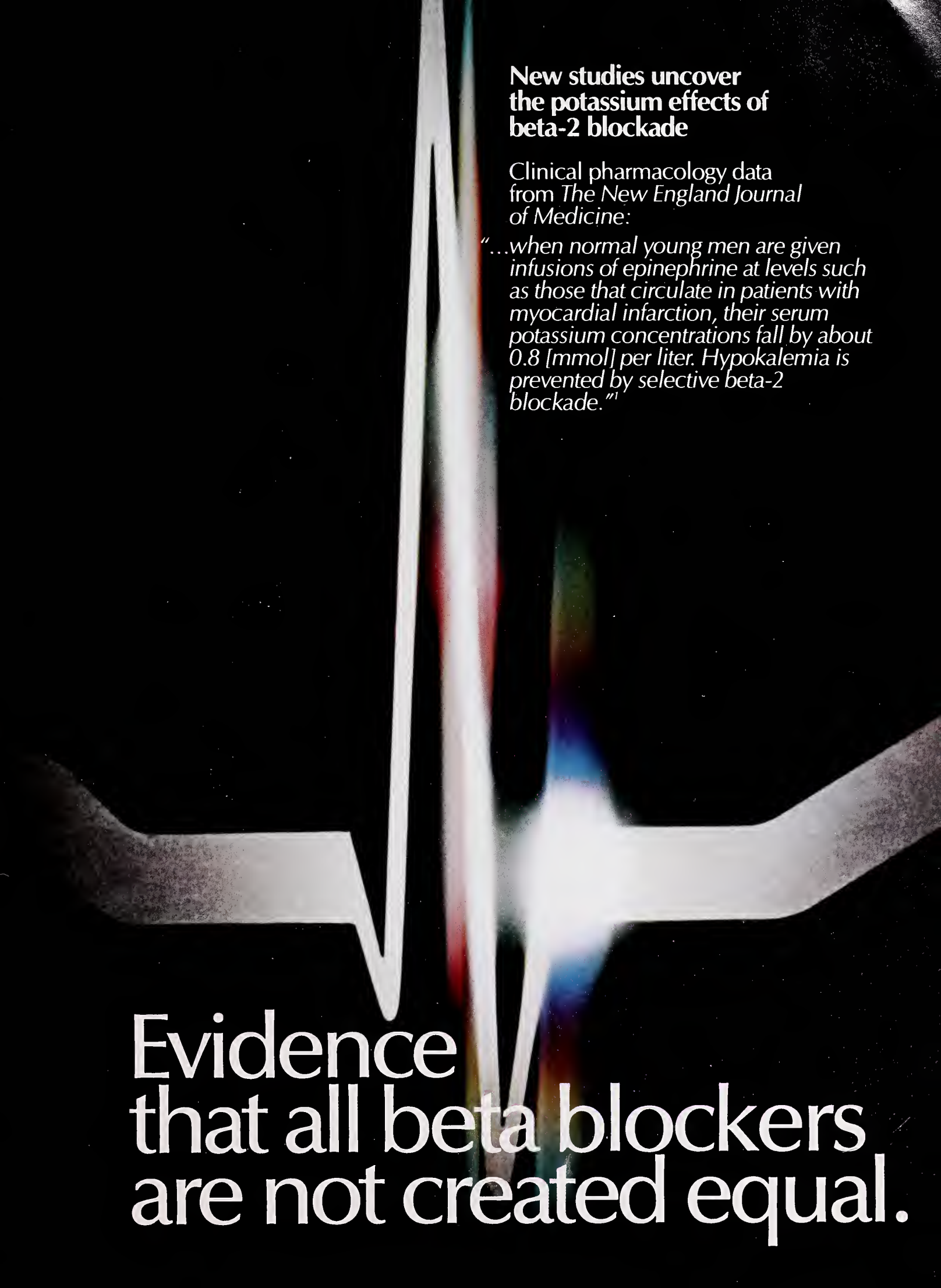
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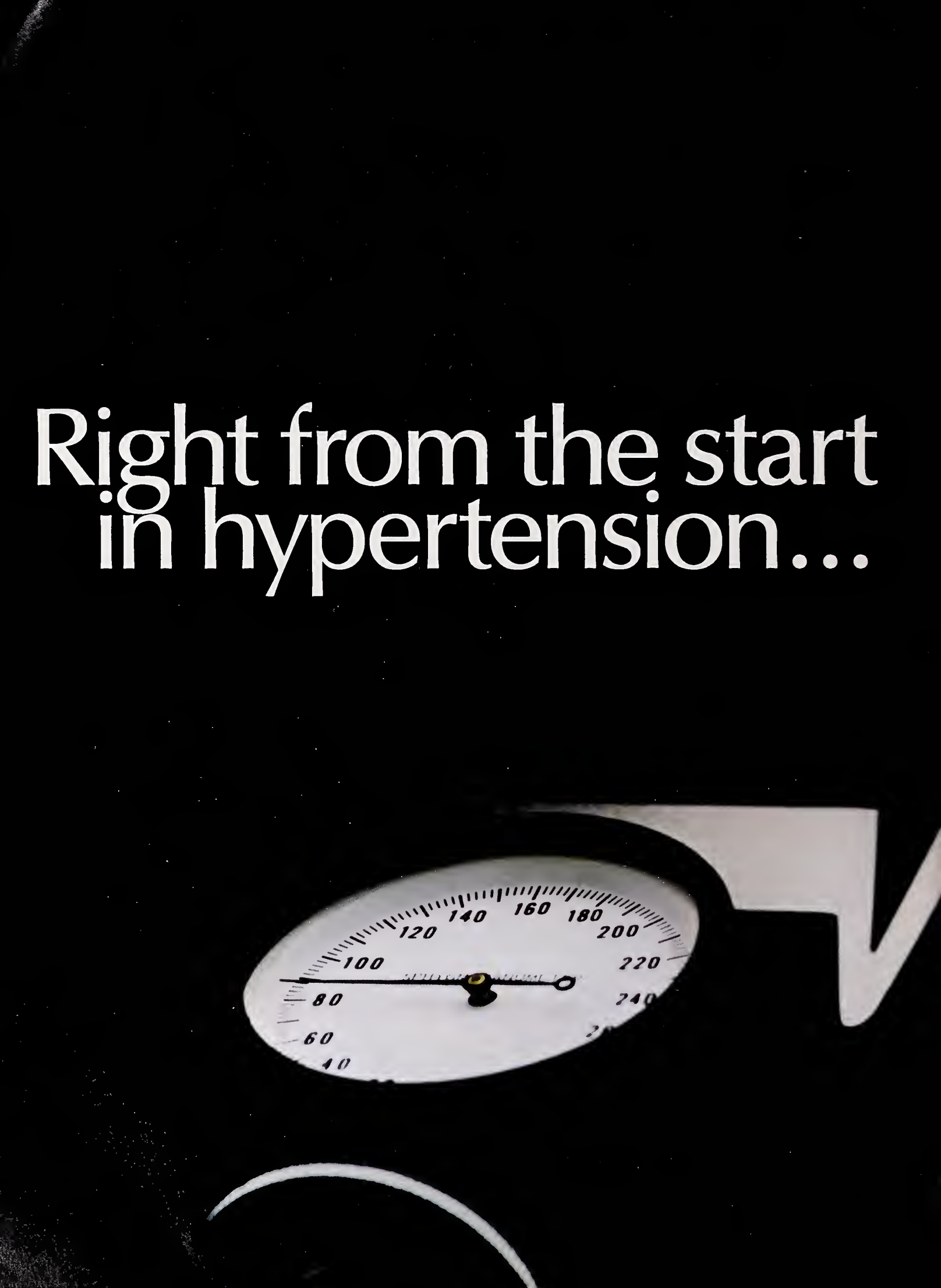
New studies uncover the potassium effects of beta-2 blockade

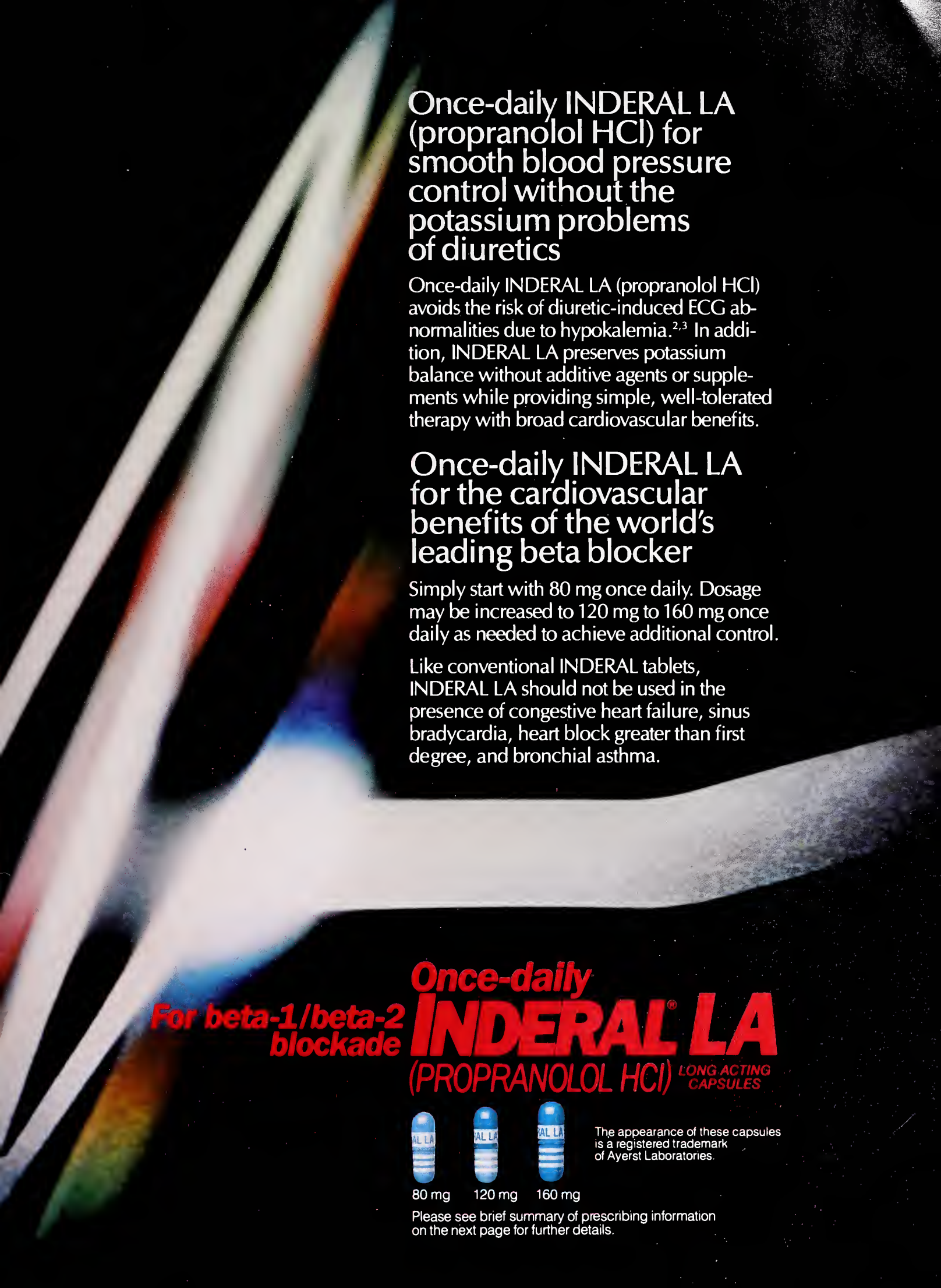
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BRIEF SUMMARY *(FOR FULL PRESCRIBING INFORMATION, SEE PACKAGE CIRCULAR.)*

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DESCRIPTION. Inderal LA is formulated to provide a sustained release of propranolol hydrochloride. Inderal LA is available as 80 mg, 120 mg, and 160 mg capsules.

CLINICAL PHARMACOLOGY. INDERAL is a nonselective beta-adrenergic receptor blocking agent possessing no other autonomic nervous system activity. It specifically competes with beta-adrenergic receptor stimulating agents for available receptor sites. When access to beta-receptor sites is blocked by INDERAL, the chronotropic, inotropic, and vasodilator responses to beta-adrenergic stimulation are decreased proportionately.

INDERAL LA Capsules (80, 120, and 160 mg) release propranolol HCl at a controlled and predictable rate. Peak blood levels following dosing with INDERAL LA occur at about 6 hours and the apparent plasma half-life is about 10 hours. When measured at steady state over a 24-hour period the areas under the propranolol plasma concentration-time curve (AUCs) for the capsules are approximately 60% to 65% of the AUCs for a comparable divided daily dose of INDERAL tablets. The lower AUCs for the capsules are due to greater hepatic metabolism of propranolol, resulting from the slower rate of absorption of propranolol. Over a twenty-four (24) hour period, blood levels are fairly constant for about twelve (12) hours then decline exponentially.

INDERAL LA should not be considered a simple mg for mg substitute for conventional propranolol and the blood levels achieved do not match (are lower than) those of two to four times daily dosing with the same dose. When changing to INDERAL LA from conventional propranolol, a possible need for retitration upwards should be considered especially to maintain effectiveness at the end of the dosing interval. In most clinical settings, however, such as hypertension or angina where there is little correlation between plasma levels and clinical effect, INDERAL LA has been therapeutically equivalent to the same mg dose of conventional INDERAL as assessed by 24-hour effects on blood pressure and on 24-hour exercise responses of heart rate, systolic pressure and rate pressure product. INDERAL LA can provide effective beta blockade for a 24-hour period.

The mechanism of the antihypertensive effect of INDERAL has not been established. Among the factors that may be involved in contributing to the antihypertensive action are (1) decreased cardiac output, (2) inhibition of renin release by the kidneys, and (3) diminution of tonic sympathetic nerve outflow from vasomotor centers in the brain. Although total peripheral resistance may increase initially, it readjusts to or below the pretreatment level with chronic use. Effects on plasma volume appear to be minor and somewhat variable. INDERAL has been shown to cause a small increase in serum potassium concentration when used in the treatment of hypertensive patients.

In angina pectoris, propranolol generally reduces the oxygen requirement of the heart at any given level of effort by blocking the catecholamine-induced increases in the heart rate, systolic blood pressure, and the velocity and extent of myocardial contraction. Propranolol may increase oxygen requirements by increasing left ventricular fiber length, end diastolic pressure and systolic ejection period. The net physiologic effect of beta-adrenergic blockade is usually advantageous and is manifested during exercise by delayed onset of pain and increased work capacity.

In dosages greater than required for beta blockade, INDERAL also exerts a quinidine-like or anesthetic-like membrane action which affects the cardiac action potential. The significance of the membrane action in the treatment of arrhythmias is uncertain.

The mechanism of the antimigraine effect of propranolol has not been established. Beta-adrenergic receptors have been demonstrated in the pial vessels of the brain.

Beta receptor blockade can be useful in conditions in which, because of pathologic or functional changes, sympathetic activity is detrimental to the patient. But there are also situations in which sympathetic stimulation is vital. For example, in patients with severely damaged hearts, adequate ventricular function is maintained by virtue of sympathetic drive which should be preserved. In the presence of AV block, greater than first degree, beta blockade may prevent the necessary facilitating effect of sympathetic activity on conduction. Beta blockade results in bronchial constriction by interfering with adrenergic bronchodilator activity which should be preserved in patients subject to bronchospasm.

Propranolol is not significantly dialyzable.

INDICATIONS AND USAGE. Hypertension: INDERAL LA is indicated in the management of hypertension; it may be used alone or used in combination with other antihypertensive agents, particularly a thiazide diuretic. INDERAL LA is not indicated in the management of hypertensive emergencies.

Angina Pectoris Due to Coronary Atherosclerosis: INDERAL LA is indicated for the long-term management of patients with angina pectoris.

Migraine: INDERAL LA is indicated for the prophylaxis of common migraine headache. The efficacy of propranolol in the treatment of a migraine attack that has started has not been established and propranolol is not indicated for such use.

Hypertrophic Subaortic Stenosis: INDERAL LA is useful in the management of hypertrophic subaortic stenosis, especially for treatment of exertional or other stress-induced angina, palpitations, and syncope. INDERAL LA also improves exercise performance. The effectiveness of propranolol hydrochloride in this disease appears to be due to a reduction of the elevated outflow pressure gradient which is exacerbated by beta-receptor stimulation. Clinical improvement may be temporary.

CONTRAINDICATIONS. INDERAL is contraindicated in 1) cardiogenic shock; 2) sinus bradycardia and greater than first degree block; 3) bronchial asthma; 4) congestive heart failure (see WARNINGS) unless the failure is secondary to a tachyarrhythmia treatable with INDERAL.

WARNINGS. CARDIAC FAILURE: Sympathetic stimulation may be a vital component supporting circulatory function in patients with congestive heart failure, and its inhibition by beta blockade may precipitate more severe failure. Although beta blockers should be avoided in overt congestive heart failure, if necessary, they can be used with close follow-up in patients with a history of failure who are well compensated and are receiving digitalis and diuretics. Beta-adrenergic blocking agents do not abolish the inotropic action of digitalis on heart muscle.

IN PATIENTS WITHOUT A HISTORY OF HEART FAILURE, continued use of beta blockers can, in some cases, lead to cardiac failure. Therefore, at the first sign or symptom of heart failure, the patient should be digitalized and/or treated with diuretics, and the response observed closely, or INDERAL should be discontinued (gradually, if possible).

IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following abrupt discontinuance of INDERAL therapy. Therefore, when discontinuance of INDERAL is planned the dosage should be gradually reduced over at least a few weeks, and the patient should be cautioned against interruption or cessation of therapy without the physician's advice. If INDERAL therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute INDERAL therapy and take other measures appropriate for the management of unstable angina pectoris. Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease who are given propranolol for other indications.

Nonallergic Bronchospasm (e.g., chronic bronchitis, emphysema)— PATIENTS WITH BRONCHOSPASTIC DISEASES SHOULD IN GENERAL NOT RECEIVE BETA BLOCKERS. INDERAL should be administered with caution since it may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta receptors.

MAJOR SURGERY: The necessity or desirability of withdrawal of beta-blocking therapy prior to major surgery is controversial. It should be noted, however, that the impaired ability of the heart to respond to reflex adrenergic stimuli may augment the risks of general anesthesia and surgical procedures.

INDERAL (propranolol HCl), like other beta blockers, is a competitive inhibitor of beta-receptor agonists and its effects can be reversed by administration of such agents, e.g., dobutamine or isoproterenol. However, such patients may be subject to protracted severe hypotension. Difficulty in starting and maintaining the heartbeat has also been reported with beta blockers.

DIABETES AND HYPOGLYCEMIA. Beta-adrenergic blockade may prevent the appearance of certain premonitory signs and symptoms (pulse rate and pressure changes) of acute hypoglycemia in labile insulin-dependent diabetes. In these patients, it may be more difficult to adjust the dosage of insulin.

THYROTOXICOSIS: Beta blockade may mask certain clinical signs of hyperthyroidism. Therefore, abrupt withdrawal of propranolol may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm. Propranolol does not distort thyroid function tests.

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker. In one case this resulted after an initial dose of 5 mg propranolol.

PRECAUTIONS. *General:* Propranolol should be used with caution in patients with impaired hepatic or renal function. INDERAL (propranolol HCl) is not indicated for the treatment of hypertensive emergencies.

Beta adrenoreceptor blockade can cause reduction of intraocular pressure. Patients should be told that INDERAL may interfere with the glaucoma screening test. Withdrawal may lead to a return of increased intraocular pressure.

Clinical Laboratory Tests: Elevated blood urea levels in patients with severe heart disease, elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase.

DRUG INTERACTIONS: Patients receiving catecholamine-depleting drugs such as reserpine should be closely observed if INDERAL is administered. The added catecholamine-blocking action may produce an excessive reduction of resting sympathetic nervous activity which may result in hypotension, marked bradycardia, vertigo, syncopal attacks, or orthostatic hypotension.

Carcinogenesis, Mutagenesis, Impairment of Fertility: Long-term studies in animals have been conducted to evaluate toxic effects and carcinogenic potential. In 18-month studies in both rats and mice, employing doses up to 150 mg/kg/day, there was no evidence of significant drug-induced toxicity. There were no drug-related tumorigenic effects at any of the dosage levels. Reproductive studies in animals did not show any impairment of fertility that was attributable to the drug.

Pregnancy: Pregnancy Category C. INDERAL has been shown to be embryotoxic in animal studies at doses about 10 times greater than the maximum recommended human dose.

There are no adequate and well-controlled studies in pregnant women. INDERAL should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers: INDERAL is excreted in human milk. Caution should be exercised when INDERAL is administered to a nursing woman.

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS. Most adverse effects have been mild and transient and have rarely required the withdrawal of therapy.

Cardiovascular: bradycardia; congestive heart failure, intensification of AV block; hypotension; paresthesia of hands; thrombocytopenic purpura; arterial insufficiency, usually of the Raynaud type.

Central Nervous System: lightheadedness; mental depression manifested by insomnia, lassitude, weakness, fatigue; reversible mental depression progressing to catatonia; visual disturbances; hallucinations; an acute reversible syndrome characterized by disorientation for time and place, short-term memory loss, emotional lability, slightly clouded sensorium, and decreased performance on neuropsychometrics.

Gastrointestinal: nausea, vomiting, epigastric distress, abdominal cramping, diarrhea, constipation, mesenteric arterial thrombosis, ischemic colitis.

Allergic: pharyngitis and agranulocytosis, erythematous rash, fever combined with aching and sore throat, laryngospasm and respiratory distress.

Respiratory: bronchospasm.

Hematologic: agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpura.

Auto-Immune: In extremely rare instances, systemic lupus erythematosus has been reported.

Miscellaneous: alopecia, LE-like reactions, psoriasiform rashes, dry eyes, male impotence, and Peyronie's disease have been reported rarely. Oculomucocutaneous reactions involving the skin, serous membranes and conjunctivae reported for a beta blocker (practolol) have not been associated with propranolol.

DOSAGE AND ADMINISTRATION. INDERAL LA provides propranolol hydrochloride in a sustained-release capsule for administration once daily. If patients are switched from INDERAL tablets to INDERAL LA capsules, care should be taken to assure that the desired therapeutic effect is maintained. INDERAL LA should not be considered a simple mg for mg substitute for INDERAL. INDERAL LA has different kinetics and produces lower blood levels. Retitration may be necessary especially to maintain effectiveness at the end of the 24-hour dosing interval.

HYPERTENSION—*Dosage must be individualized.* The usual initial dosage is 80 mg INDERAL LA once daily, whether used alone or added to a diuretic. The dosage may be increased to 120 mg once daily or higher until adequate blood pressure control is achieved. The usual maintenance dosage is 120 to 160 mg once daily. In some instances a dosage of 640 mg may be required. The time needed for full hypertensive response to a given dosage is variable and may range from a few days to several weeks.

ANGINA PECTORIS—*Dosage must be individualized.* Starting with 80 mg INDERAL LA once daily, dosage should be gradually increased at three to seven day intervals until optimum response is obtained. Although individual patients may respond at any dosage level, the average optimum dosage appears to be 160 mg once daily. In angina pectoris, the value and safety of dosage exceeding 320 mg per day have not been established.

If treatment is to be discontinued, reduce dosage gradually over a period of a few weeks (see WARNINGS).

MIGRAINE—*Dosage must be individualized.* The initial oral dose is 80 mg INDERAL LA once daily. The usual effective dose range is 160-240 mg once daily. The dosage may be increased gradually to achieve optimum migraine prophylaxis. If a satisfactory response is not obtained within four to six weeks after reaching the maximum dose, INDERAL LA therapy should be discontinued. It may be advisable to withdraw the drug gradually over a period of several weeks.

HYPERTROPHIC SUBAORTIC STENOSIS—80-160 mg INDERAL LA once daily.

PEDIATRIC DOSAGE—At this time the data on the use of the drug in this age group are too limited to permit adequate directions for use.

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Hypertrophic Cardiomyopathy in Childhood: Part I

RAND MALONE, M.D., WESLEY COVITZ, M.D., and
E. J. LOVETT, M.D., *Augusta**

HYPERTROPHIC CARDIOMYOPATHY (HCM) is a primary disease of cardiac muscle characterized by a hypertrophied but nondilated left ventricle in the absence of another cardiac or systemic disease capable of producing left ventricular hypertrophy.[1] It was first documented in 1958 by Teare,[2] who characterized the disease as "asymmetrical hypertrophy of the heart." Since 1958, a number of morphologic, physiologic, and clinical features have been closely associated with HCM. However, in the last few years, research studies have brought about advances that shed new light on HCM. This report is designed to integrate many of these progressive concepts into our understanding of HCM.

Dynamics

The first major area of concern involves left ventricular morphology and physiology. For years it was thought that one of the invariable characteristics of HCM was asymmetric septal hypertrophy, which was first described by Abbasi in 1973.[3]

This report is designed to integrate many of the progressive concepts resulting from recent research into our understanding of hypertrophic cardiomyopathy (HCM).

Henry and associates[4] emphasized that a ratio of ventricular septal thickness to posterior free wall of 1.3 or greater was pathognomonic of HCM. But recent data indicate that though 91% of patients with HCM have ratios of 1.3 or greater, so do many normal subjects.[5] It has also been shown that 25% of normal neonates, many infants with congenital heart disease, and 10% of older children and adults with heart disease have disproportionate ventricular septal thickness.[6] Asymmetric septal hypertrophy now appears to be secondary to the particular underlying cardiac disease.[7] Maron and Epstein[6] have found that it does not occur in patients with right ventricular overload unless right ventricular pressures exceed 40 mm hg. For these reasons, it is apparent that asymmetric septal hypertrophy is not pathognomonic of HCM, though it can be fairly specific. Doi[5] suggests that an interventricular septum to left ventricular free wall ratio of 1.5 or greater is 94% specific for HCM.

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Articles for this Page are sponsored and approved by the American Heart Association, Georgia Affiliate. Those wishing to contribute papers to this Page are invited to send them to Dr. Laurence O. Watkins, "Heart Page" Editor, Section of Cardiology, Dept. of Medicine, MCG, Augusta, GA 30909.

The septum in HCM has also been noted to be virtually noncontractile or hypokinetic, with decreased systolic thickening and excursion.[8] Ciro et al.[7] found that a hypocontractile interventricular septum is a frequent morphologic marker found in approximately 75% of patients with HCM. However, it is also common in patients with other cardiac diseases that produce left ventricular hypertrophy and pressure overload.

A major controversy in HCM involves the issue of obstruction to the left ventricular outflow tract and the development of an intraventricular pressure gradient during systole. Though a gradient was thought to be important in the past, it is now clear that many patients with HCM have a systolic pressure gradient only with provocation, while some have no gradient at all.[9] Murgo and associates[10] recently studied flow and velocity in the aorta and left ventricle simultaneously. They found that ejection from the left ventricle was completed earlier in HCM (80% in the first half of systole) than in normal subjects and showed no significant difference in ejection characteristics between HCM with a gradient than without a gradient. Cineventriculography has revealed that during the second half of systole, the ventricular cavity is completely obliterated by apposition of the septum and ventricular walls. Thus, they concluded that "outflow obstruction" did not interfere with left ventricular emptying in HCM.

Premature aortic closure was thought to be another characteristic of HCM, but now it is evident that this closure occurs only in special circumstances.

If there is no "real" left ventricular outflow obstruction, then what is responsible for the systolic pressure gradient? Criley's work[11] has demonstrated that catheter tip entrapment or cavity obliteration may be the cause of the systolic pressure gradient seen in many studies. In spite of Criley's assertion, many authors have observed an abnormal forward movement of the anterior leaflet of the mitral valve during the middle third of systole and apposition of the leaflet with the hypertrophied interventricular septum in association with a pressure gradient. Systolic anterior motion is not a particularly sensitive marker for HCM, though it is nearly 100% specific.[7]

The abrupt decrease in left ventricular output during late systole leads to a transient closure of the aortic valve. This closure was thought to be another characteristic of HCM, but now it is evident that premature aortic closure occurs only in special circumstances in HCM. Recent work reveals that mid-systolic closure of the aortic valve occurs quite commonly in patients with a resting pressure gradient across the left ventricular outflow tract of 20 mm Hg or more[12] and in all patients with gradients at rest, but is quite rare when little or no gradient is present.[13]

There are two other important characteristics of HCM that may contribute to overall cardiac function. First of all, it has been found that ventricular contraction results in nearly total emptying of the left ventricle with a supernormal ejection fraction. Since the septum is hypokinetic, it seems plausible to suppose that the left ventricular free wall contraction is exaggerated to compensate for reduced septal contraction. However, with time, left ventricular free wall contraction is also decreased.[8]

The second point relating to cardiac function helps one understand how a patient with HCM and excellent contractility can have functional limitation. There is a substantial impedance to left ventricular diastolic filling caused by the poor compliance of a left ventricle formed from fibers with an increased number of contractile elements and disturbed architecture. Filling does not occur through stretching of the fibers but instead by reorientation of fibers, causing a more spherical configuration to the ventricle.[14] Poor compliance can therefore cause a decreased end-diastolic volume with an elevated end-diastolic pressure.

A greater understanding of diagnostic aspects of HCM has resulted from the increased use of 2-dimensional echocardiography. For years, attention was focused on the asymmetric hypertrophy of the interventricular septum, because this seemed so important to the diagnosis of this disorder. Maron and other investigators,[15, 16] however, clarified that there are several patterns of distribution of hypertrophy in HCM. Each pattern may be associated with unique morphologic, physiologic, and prognostic characteristics.

Diagnosis

The most common pattern of HCM seen in Maron's study[15] was one manifested by substantial hypertrophy of both the anterior and posterior portions of the ventricular septum and the anterolateral left ventricular free wall. It is designated Type III and was detected in 52% of subjects. Because of the location of hypertrophy, Type III HCM is more closely associated with certain characteristics which are seen less often in other patterns: 48% manifest systolic anterior motion, while only 18% of other types do so; patients more often experience moderate to severe functional limitations (58% versus 27%); there is an increased prevalence of demonstrable left ventricular outflow gradients under basal conditions (55% versus 18%); and there is electrocardiographic evidence of left ventricular hypertrophy in 74%.

The second most prevalent pattern seen in 20% of study patients is Type II. Hypertrophy involves the entire interventricular septum, but none of the left ventricular free wall is involved. This pattern has no specific clinical characteristics. In Type I, HCM (10% of patients), hypertrophy is confined to the anterior portion of the interventricular septum without left ventricular free wall involvement. There is no characteristic ECG pattern. This type is particularly prevalent in older patients (mean age 45 $\pm$ 4 years, compared to the study total mean of 33 $\pm$ 1 years).[15]

The most startling observation of Maron[15] was that in Type IV, which is found in 18% of patients with HCM, hypertrophy involves regions other than the basal anterior interventricular septum. The hypertrophy is commonly concentrated in the apical portions of the septum and left ventricle. Maron[15] found that Type IV is more common in a younger population of patients, mean age of 25 $\pm$ 3 years, compared to 36 $\pm$ 1 years for the rest of the group.

The most consistent EKG abnormality is the presence of abnormal Q waves in the precordial leads.[17] These abnormal Q waves are thought by many to be the result of depolarization of the hypertrophied septum. Yet Maron[16] has found that only 19% of patients with Type III HCM and marked septal hypertrophy have abnormal Q waves. Obviously, abnormal Q waves cannot be explained on the basis of ventricular hypertrophy alone.[17]

Inheritance

Since the recognition of HCM as a disease entity, it has been appreciated that there is a familial association thought to represent an autosomal dominant mode of transmission. Maron et al.[18] recently screened 370 first degree relatives (parents, siblings, or offspring) of 70 probands with HCM. HCM was genetically transmitted in 56% (autosomal dominant) and occurred sporadically in 44%. Fathers of the proband were most commonly affected (40%), offspring were least affected (14%), and 23% of siblings were found to have HCM. It was interesting that of the probands, 81% had functional limitations, 52% had left ventricular outflow gradients, and 59% had Type III HCM. However, the affected relatives found by screening were quite different: over 70% had no functional limitation or left ventricular outflow gradients, and only 40% had the Type III pattern. In relatives who did not have HCM by echocardiography, 10% of those less than 40 years of age had distinct abnormalities on ECG compatible with those seen in HCM. These findings suggest that HCM may be identified electrocardiographically prior to the development of characteristic echographic abnormalities. In another study of relatives of three patients with apical HCM who had common grandparents,

Maron[19] found 15 other family members with HCM; 10 of these died suddenly. Some of the affected relatives had apical (Type IV) HCM, but the rest had the more common types of HCM. The authors felt that apical HCM was not a separate entity from the other patterns but simply part of the spectrum of HCM. Recent studies have sought antigens which might indicate a propensity to HCM or might be a marker for it. A Japanese group had observed that HLA-DR4 is especially prevalent in "obstructive" HCM,[20] while HLA-DR2 is seen almost exclusively in "nonobstructive" types.[21] None of these associations is absolute, since not every person with a particular haplotype manifests HCM. In genetic counseling of families with HCM, it is important to understand the manner of inheritance that is present in a particular family. Two-dimensional echocardiography screening may help to clarify whether a case is sporadic or whether there is a high degree of genetic transmission. In a sporadic case, there is still a 20% chance of genetic transmission; in familial cases, the likelihood is as high as 25-50%.

Conclusion

On closer inspection, hypertrophic cardiomyopathy is not the disease it was thought to be. Perhaps the most unexpected observation is that the anterior septum need not be involved, resulting in cases without asymmetric septal hypertrophy. Because this pattern is more common in younger patients, 2-dimensional echocardiography is mandatory if the physician wishes to detect the patterns of hypertrophy now known to represent this disease. Systolic anterior motion of the anterior mitral leaflet and premature aortic closure are often absent, though when present they are specific for HCM. Left ventricular outflow obstruction is not the basic problem in hypertrophic cardiomyopathy. A high ejection fraction and poor left ventricular compliance are typical. Though hypertrophic cardiomyopathy has an autosomal dominant pattern of inheritance, sporadic cases are common. Relatives of probands tend to be less severely affected, and some may have electrocardiographic abnormalities without echocardiographic findings.

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president's letter



It's Time For Tort Reform

One of the most ambitious projects of the Medical Association of Georgia in recent history has been the formation of the MAG Mutual Insurance Company. This physician-owned, MAG-sponsored company was conceived by the MAG and formed at the direction of the MAG Board of Directors.

After funds for organizational expenses were provided by the MAG (long since repaid), surplus certificates were purchased by a requisite number of MAG members. After much hard work by many, MAG Mutual became operational on June 1, 1982.

Growth in policyholders, reserves, and all facets of the business has exceeded all expectations. Due to the expert guidance of the physician Board of Directors, whose chairman is Dr. Charles Hollis, of Albany, as well as sound professional management, it has become a national model of a successful physician-owned professional liability insurance company. It has been designated MAG's sponsored carrier by the MAG Executive Committee.

Although MAG Mutual does not insure (yet) the majority of Georgia physicians, the fact of its presence in our state provides significant competition to other carriers. This alone has resulted in savings of several million dollars in premiums for all Georgia physicians.

Even so, we are all painfully aware of the astronomical costs related to the whole spectrum of professional liability. Increasing numbers of claims result in unnecessary costs related to "defensive medicine." High premiums in some claims-prone specialties are causing some doctors to discontinue some phase of their practice, such as obstetrics.

In order to stem this tide, it is vital that we have some meaningful reform of our tort laws by the state legislature. This will benefit every physician policyholder in Georgia and ultimately the patients we serve. Several measures for tort reform have been proposed by the Governor's Advisory Council on Medical Malpractice. These were published in the MAG Newsletter of December, 1984. It is urgent for us all to become familiar with these proposals.

The business community is cognizant of the high costs related to professional liability and how it is reflected in their increasing costs of providing health care coverage for their employees. It is urgent for us to get our friends in business and the public at large to join us in asking our local legislators to support the recommendations of this council. Do it now, while the legislature is still in session.

S. William Clark

S. William Clark, Jr., M.D.

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PERSONALS

Fourth District

Andrew P. Morley, Jr., M.D., of Decatur, was recently elected president of the Georgia Academy of Family Physicians. **Phillip R. Rogers, M.D.,** was elected to the Board of Directors as the Fourth District representative for DeKalb County, and **Omar Najjar, M.D.,** was elected to the Board of Directors as an Alternate Director for the Fourth District.

Fifth District

Atlanta internist **Brown W. Dennis, M.D.,** was named recipient of the Aven Citizenship Award, the Medical Association of Atlanta's highest award for outstanding community service.

John E. Lee, M.D., has been appointed chairman of the medical staff of Northside Hospital for 1985. **Charles Rogers, M.D.,** is the new vice chairman, and **Bobb Cucher, M.D.,** is secretary/treasurer.

George W. Brumley, Jr., M.D., Chairman of the Department of Pediatrics at Emory University, was recognized as a distinguished alumnus at the Duke University Medical Alumni Association banquet held on the Durham campus on November, 1984.

Sixth District

Shajih L. Muhanna, M.D., was elected as a Fellow of the American College of Surgeons.

Seventh District

Larry Formby, M.D., a Rome urologist, was inducted as a Fellow of the American College of Surgeons.

Ninth District

James D. Haymore, M.D., opened a new practice in Ellijay, offering a general practice with an emphasis on women's health care and obstetrics.

SOCIETIES

William H. Whaley, M.D., has been installed as president of the **Medical Association of Atlanta** for 1985. *Richard E. DuBois, M.D.,* was elected president-elect.

Four members of the Association received Certificates in recognition of 50 years in the practice of medicine: *C. Dixon Fowler, M.D., Wadley R. Glenn, M.D., Marvin A. Mitchell, M.D., and William E. Mitchell, M.D.*

DEATHS

Michaela Livshitz Dynin

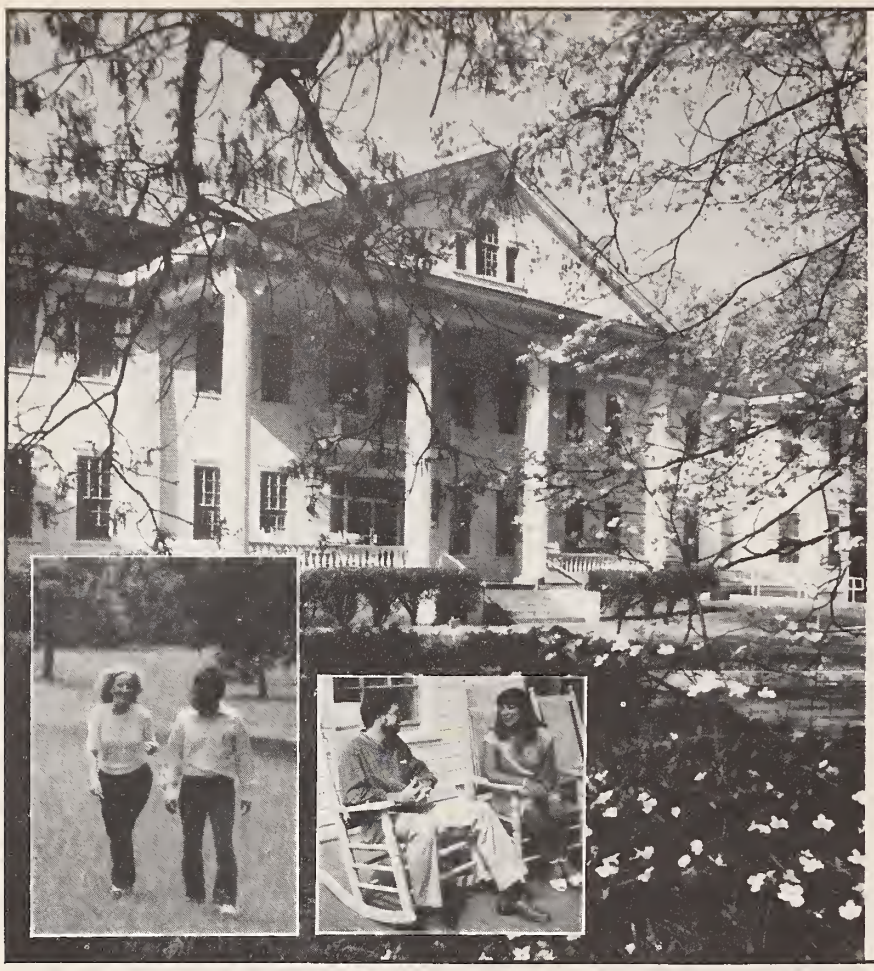
Michaela Livshitz Dynin, M.D., 55, died December 10. Dr. Dynin was a graduate of Hebrew University in Jerusalem and did her graduate work at the University of North Carolina and Cleveland Psychiatric Institute. In addition to her private practice, she was associated with the Georgia Regional Hospital.

Survivors include her husband, two sons, and a brother.

Zachary McCord Kilpatrick

Zachary McCord Kilpatrick, M.D., of Augusta, died December 8 at age 50. Dr. Kilpatrick attended Davidson College and the Medical College of Georgia. He received his post doctoral training at Parkland Memorial Hospital in Dallas and Yale University School of Medicine. Dr. Kilpatrick was a Fellow of the American College of Physicians and past president of the Georgia Gastroenterology Society and chief of the Gastroenterology Division of University Hospital. He was associate clinical professor of medicine at the Medical College of Georgia and a consultant in gastroenterology for the Veterans Administration Hospital in Dublin, Central State Hospital in Milledgeville, Memorial Hospital in Savannah, and Dwight David Eisenhower Army Medical Center. He served as associate dean for curriculum at the Medical College of Georgia from 1968 to 1970.

Survivors include his wife, two daughters, one son, his mother, and two brothers.



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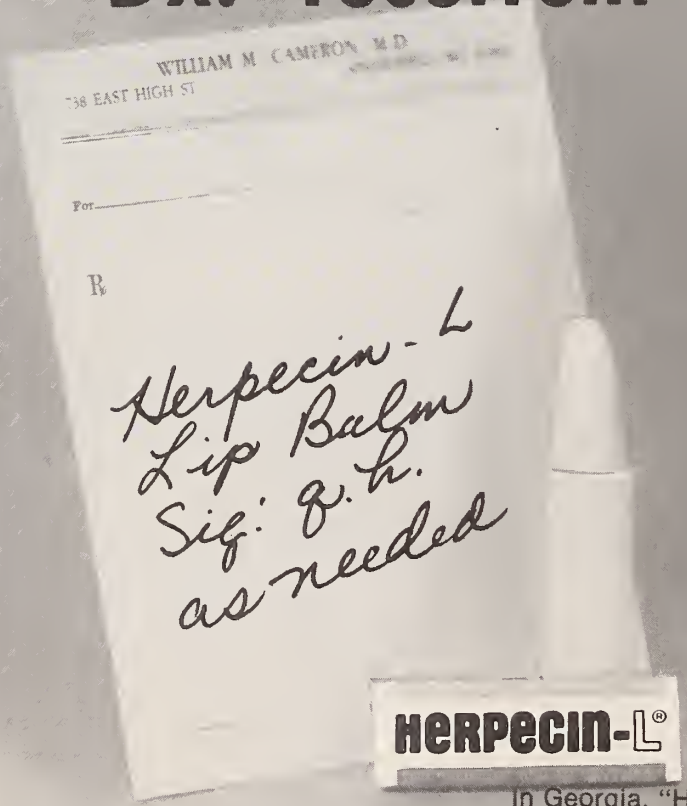
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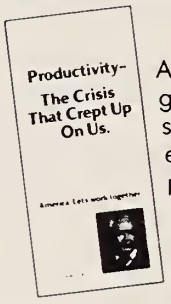
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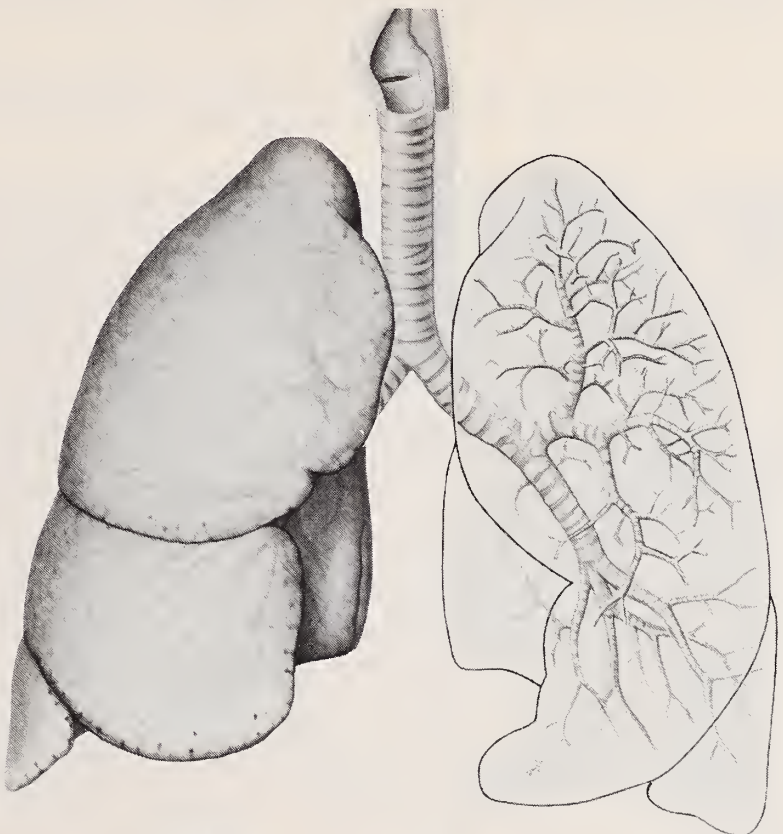
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Antibiotics, including Ceclor, should be administered cautiously to any patient who has demonstrated some form of allergy, particularly to drugs.

Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics (including macrolides, semisynthetic penicillins, and cephalosporins); therefore, it is important to consider its diagnosis in patients who develop diarrhea in association with the use of antibiotics. Such colitis may range in severity from mild to life-threatening.

Treatment with broad-spectrum antibiotics alters the normal flora of the colon and may permit overgrowth of clostridia. Studies indicate that a toxin produced by *Clostridium difficile* is one primary cause of antibiotic-associated colitis.

Mild cases of pseudomembranous colitis usually respond to drug discontinuance alone. In moderate to severe cases, management should include sigmoidoscopy, appropriate bacteriologic studies, and fluid, electrolyte, and protein supplementation. When the colitis does not improve after the drug has been discontinued, or when it is severe, oral vancomycin is the drug of choice for antibiotic-associated pseudomembranous colitis produced by *C. difficile*. Other causes of colitis should be ruled out.

Precautions: *General Precautions* — If an allergic reaction to Ceclor* (cefaclor, Lilly) occurs, the drug should be discontinued, and, if necessary, the patient should be treated with appropriate agents, e.g., pressor amines, antihistamines, or corticosteroids.

Prolonged use of Ceclor may result in the overgrowth of nonsusceptible organisms. Careful observation of the patient is essential. If superinfection occurs during therapy, appropriate measures should be taken.

Positive direct Coombs' tests have been reported during treatment with the cephalosporin antibiotics. In hematologic studies or in transfusion cross-matching procedures when antiglobulin tests are performed on the minor side or in Coombs' testing of newborns whose mothers have received cephalosporin antibiotics before parturition, it should be recognized that a positive Coombs' test may be due to the drug.

Ceclor should be administered with caution in the presence of markedly impaired renal function. Under such conditions, careful clinical observation and laboratory studies should be made because safe dosage may be lower than that usually recommended.

As a result of administration of Ceclor, a false-positive reaction for glucose in the urine may occur. This has been observed with Benedict's and Fehling's solutions and also with Clinitest* tablets but not with Tes-Tape* (Glucose Enzymatic Test Strip, USP, Lilly).

Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.

Usage in Pregnancy — Pregnancy Category B — Reproduction studies have been performed in mice and rats at doses up to 12 times the human dose and in ferrets given three times the maximum human dose and have revealed no evidence of impaired fertility or harm to the fetus due to Ceclor* (cefaclor, Lilly). There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed.

Nursing Mothers — Small amounts of Ceclor have been detected in mother's milk following administration of single 500-mg doses. Average levels were 0.18, 0.20, 0.21, and 0.16 mcg/ml at two, three, four, and five hours respectively. Trace amounts were detected at one hour. The effect on nursing infants is not known. Caution should be exercised when Ceclor is administered to a nursing woman.

Usage in Children — Safety and effectiveness of this product for use in infants less than one month of age have not been established.

Adverse Reactions: Adverse effects considered related to therapy with Ceclor are uncommon and are listed below.

Gastrointestinal symptoms occur in about 2.5 percent of patients and include diarrhea (1 in 70).

Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment. Nausea and vomiting have been reported rarely.

Hypersensitivity reactions have been reported in about 1.5 percent of patients and include morbiliform eruptions (1 in 100). Pruritus, urticaria, and positive Coombs' tests each occur in less than 1 in 200 patients. Cases of serum-sickness-like reactions (erythema multiforme or the above skin manifestations accompanied by arthritis/arthralgia and, frequently, fever) have been reported. These reactions are apparently due to hypersensitivity and have usually occurred during or following a second course of therapy with Ceclor. Such reactions have been reported more frequently in children than in adults. Signs and symptoms usually occur a few days after initiation of therapy and subside within a few days after cessation of therapy. No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome.

Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy.

Other effects considered related to therapy included eosinophilia (1 in 50 patients) and genital pruritus or vaginitis (less than 1 in 100 patients).

Causal Relationship Uncertain — Transitory abnormalities in clinical laboratory test results have been reported. Although they were of uncertain etiology, they are listed below to serve as alerting information for the physician.

Hepatic — Slight elevations in SGDT, SGPT, or alkaline phosphatase values (1 in 40).

Hematopoietic — Transient fluctuations in leukocyte count, predominantly lymphocytosis occurring in infants and young children (1 in 40).

Renal — Slight elevations in BUN or serum creatinine (less than 1 in 500) or abnormal urinalysis (less than 1 in 200).

(D617B2R)

Note: Ceclor* (cefaclor, Lilly) is contraindicated in patients with known allergy to the cephalosporins and should be given cautiously to penicillin-allergic patients.

Penicillin is the usual drug of choice in the treatment and prevention of streptococcal infections, including the prophylaxis of rheumatic fever. See prescribing information.

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Jack A. Morgenstern, M.D.
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For further information contact:

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Hospital Administrator: James R. Thomas

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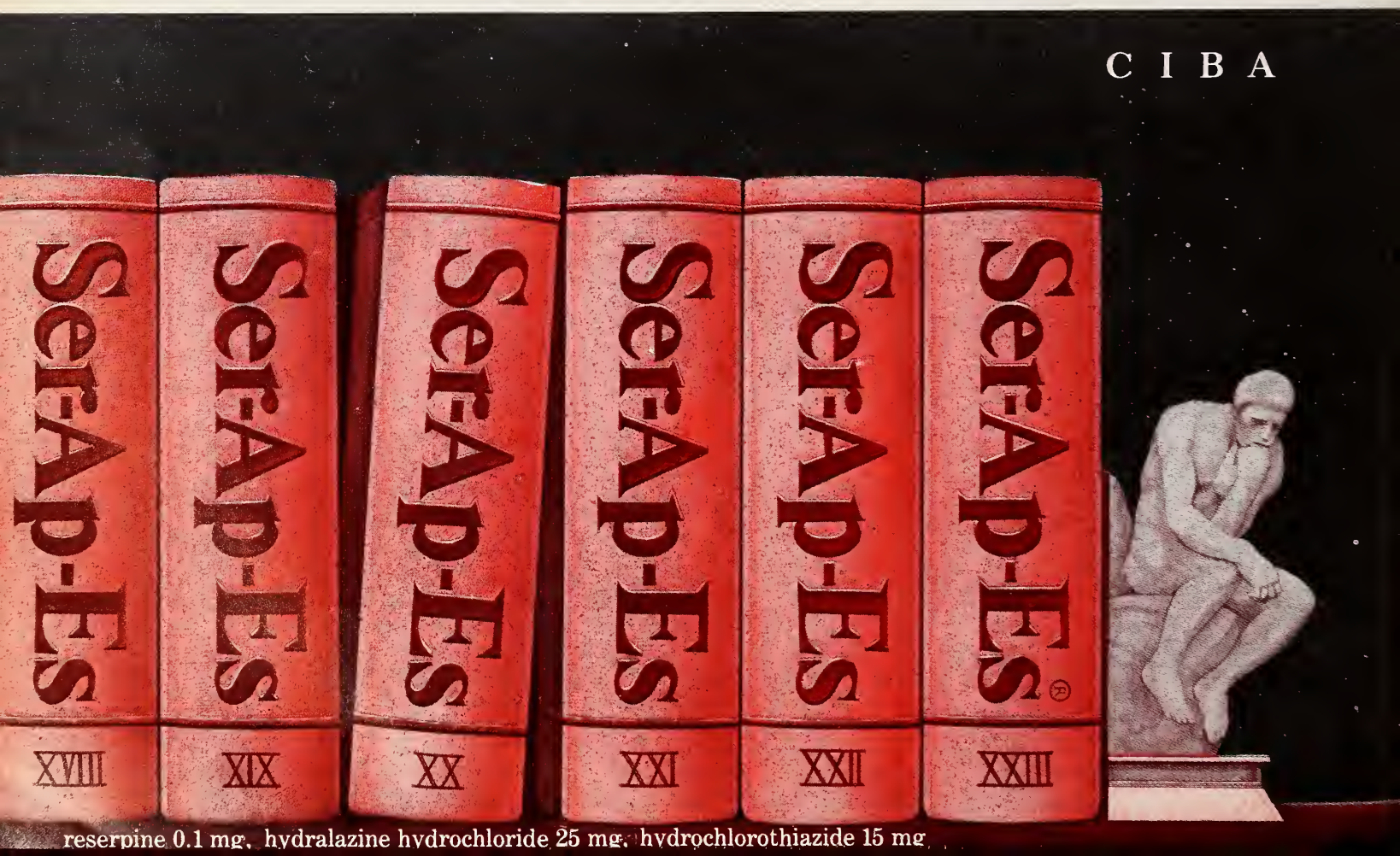
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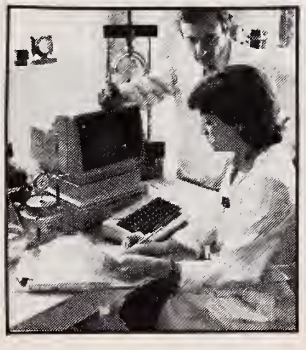
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See following page for brief summary of prescribing information.

SORBITRATE®
(ISOSORBIDE DINITRATE)

Please consult full prescribing information before use. A summary follows:

INDICATIONS AND USAGE: SORBITRATE (isosorbide dinitrate) is indicated for the treatment and prevention of angina pectoris. All dosage forms of isosorbide dinitrate may be used prophylactically to decrease frequency and severity of anginal attacks and can be expected to decrease the need for sublingual nitroglycerin.

The sublingual and chewable forms of the drug are indicated for acute prophylaxis of angina pectoris when taken a few minutes before situations likely to provoke anginal attacks. Because of a slower onset of effect, the oral forms of isosorbide dinitrate are not indicated for acute prophylaxis.

CONTRAINDICATIONS: SORBITRATE is contraindicated in patients who have shown purported hypersensitivity or idiosyncrasy to it or other nitrates or nitrites. Epinephrine and related compounds are ineffective in reversing the severe hypotensive events associated with overdose and are contraindicated in this situation.

WARNINGS: The benefits of SORBITRATE during the early days of an acute myocardial infarction have not been established. If one elects to use organic nitrates in early infarction, hemodynamic monitoring and frequent clinical assessment should be used because of the potential deleterious effects of hypotension.

PRECAUTIONS: General: Severe hypotensive response, particularly with upright posture, may occur with even small doses of SORBITRATE. The drug should therefore be used with caution in subjects who may have blood volume depletion from diuretic therapy or in subjects who have low systolic blood pressure (eg, below 90 mmHg). Paradoxical bradycardia and increased angina pectoris may accompany nitrate-induced hypotension. Nitrate therapy may aggravate the angina caused by hypertrophic cardiomyopathy.

Marked symptomatic, orthostatic hypotension has been reported when calcium channel blockers and organic nitrates were used in combination. Dose adjustment of either class of agents may be necessary.

Tolerance to this drug and cross-tolerance to other nitrates and nitrites may occur. Tolerance to the vascular and antianginal effects of isosorbide dinitrate or nitroglycerin has been demonstrated in clinical trials, experience through occupational exposure, and in isolated tissue experiments in the laboratory. The importance of tolerance to the appropriate use of isosorbide dinitrate in the management of patients with angina pectoris has not been determined. However, one clinical trial using treadmill exercise tolerance (as an end point) found an 8-hour duration of action of oral isosorbide dinitrate following the first dose (after a 2-week placebo washout) and only a 2-hour duration of effect of the same dose after 1 week of repetitive dosing at conventional dosing intervals. On the other hand, several trials have been able to differentiate isosorbide dinitrate from placebo after 4 weeks of therapy and, in open trials, an effect seems detectable for as long as several months.

Tolerance clearly occurs in industrial workers continuously exposed to nitroglycerin. Moreover, physical dependence also occurs since chest pain, acute myocardial infarction, and even sudden death have occurred during temporary withdrawal of nitroglycerin from the workers. In clinical trials in angina patients, there are reports of anginal attacks being more easily provoked and of rebound in the hemodynamic effects soon after nitrate withdrawal. The relative importance of these observations to the routine, clinical use of isosorbide dinitrate is not known. However, it seems prudent to gradually withdraw patients from isosorbide dinitrate when the therapy is being terminated, rather than stopping the drug abruptly.

Information for Patients: Headache may occur during initial therapy with SORBITRATE. Headache is usually relieved by the use of standard headache remedies or by lowering the dose and tends to disappear after the first week or two of use.

Drug Interactions: Alcohol may enhance any marked sensitivity to the hypotensive effect of nitrates.

Isosorbide dinitrate acts directly on vascular smooth muscle; therefore, any other agent that depends on vascular smooth muscle as the final common path can be expected to have decreased or increased effect depending on the agent.

Carcinogenesis, Mutagenesis, Impairment of Fertility: No long-term studies in animals have been performed to evaluate the carcinogenic potential of this drug. A modified two-litter reproduction study in rats fed isosorbide dinitrate at 25 or 100 mg/kg/day did not reveal any effects on fertility or gestation or any remarkable gross pathology in any parent or offspring fed isosorbide dinitrate as compared with rats fed a basal-controlled diet.

Pregnancy Category C: Isosorbide dinitrate has been shown to cause a dose-related increase in embryotoxicity (increase in mummified pups) in rabbits at oral doses 35 and 150 times the maximum recommended human daily dose. There are no adequate and well-controlled studies in pregnant women. SORBITRATE should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers: It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when SORBITRATE is administered to a nursing woman.

Pediatric Use: The safety and effectiveness of SORBITRATE in children has not been established.

ADVERSE REACTIONS: Adverse reactions, particularly headache and hypotension, are dose-related. In clinical trials at various doses, the following have been observed.

Headache is the most common (reported incidence varies widely, apparently being dose-related, with an average occurrence of about 25%) adverse reaction and may be severe and persistent. Cutaneous vasodilation with flushing may occur. Transient episodes of dizziness and weakness, as well as other signs of cerebral ischemia associated with postural hypotension, may occasionally develop (the incidence of reported symptomatic hypotension ranges from 2% to 36%). An occasional individual will exhibit marked sensitivity to the hypotensive effects of nitrates and severe responses (nausea, vomiting, weakness, restlessness, pallor, perspiration, and collapse) may occur even with the usual therapeutic dose. Drug rash and/or exfoliative dermatitis may occasionally occur. Nausea and vomiting appear to be uncommon. Case reports of clinically significant methemoglobinemia are rare at conventional doses of organic nitrates. The formation of methemoglobin is dose-related and, in the case of genetic abnormalities of hemoglobin that favor methemoglobin formation, even conventional doses of organic nitrate could produce harmful concentrations of methemoglobin.

DOSAGE AND ADMINISTRATION: For the treatment of angina pectoris, the usual starting dose for sublingual SORBITRATE is 2.5 to 5 mg; for chewable tablets, 5 mg; for oral (swallowed) tablets, 5 to 20 mg, and for controlled-release forms, 40 mg.

SORBITRATE should be titrated upward until angina is relieved or side effects limit the dose. In ambulatory patients, the magnitude of the incremental dose increase should be guided by measurements of standing blood pressure.

The initial dosage of sublingual or chewable SORBITRATE for prophylactic therapy in angina pectoris patients is generally 5 or 10 mg every 2 to 3 hours. Adequate controlled clinical studies demonstrating the effectiveness of chronic maintenance therapy with these dosage forms have not been reported.

SORBITRATE in oral doses of 10 to 40 mg given every 6 hours or in oral controlled-release doses of 40 to 80 mg given every 8 to 12 hours is generally recommended. The extent to which development of tolerance should modify the dosage program has not been defined. *The oral controlled-release forms of isosorbide dinitrate should not be chewed.*

DOSAGE FORMS AVAILABLE: Sublingual Tablets (2.5, 5, 10 mg); Chewable Tablets (5, 10 mg); Oral Tablets (5, 10, 20, 30, 40 mg); Sustained Action Tablets (40 mg).

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> Soter NA, Wasserman SI, Austen KF. Cold urticaria release into circulation of histamine and eosinophil chemotactic factor of anaphylaxis during cold challenge. N Engl J Med 1976;294:687-90.

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References: 1. Kales J *et al: Clin Pharmacol Ther 12*:691-697, Jul-Aug 1971. **2.** Kales A *et al: Clin Pharmacol Ther 18*:356-363, Sep 1975. **3.** Kales A *et al: Clin Pharmacol Ther 19*:576-583, May 1976. **4.** Kales A *et al: Clin Pharmacol Ther 32*:781-788, Dec 1982. **5.** Frost JD Jr, DeLucchi MR: *J Am Genatr Soc 27*:541-546, Dec 1979. **6.** Kales A, Kales JD: *J Clin Pharmacol 3*:140-150, Apr 1983. **7.** Greenblatt DJ, Allen MD, Shader RI: *Clin Pharmacol Ther 21*:355-361, Mar 1977. **8.** Zimmerman AM: *Curr Ther Res 13*:18-22, Jan 1971. **9.** Amrein R *et al: Drugs Exp Clin Res 9*(1):85-99, 1983. **10.** Monti JM: *Methods Find Exp Clin Pharmacol 3*:303-326, May 1981. **11.** Greenblatt DJ *et al: Sleep 5*(Suppl 1):S18-S27, 1982. **12.** Kales A *et al: Pharmacology 26*:121-137, 1983.

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Indications: Effective in all types of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening, in patients with recurring insomnia or poor sleeping habits, in acute or chronic medical situations requiring restful sleep. Objective sleep laboratory data have shown effectiveness for at least 28 consecutive nights of administration. Since insomnia is often transient and intermittent, prolonged administration is generally not necessary or recommended. Repeated therapy should only be undertaken with appropriate patient evaluation.

Contraindications: Known hypersensitivity to flurazepam HCl; pregnancy. Benzodiazepines may cause fetal damage when administered during pregnancy. Several studies suggest an increased risk of congenital malformations associated with benzodiazepine use during the first trimester. Warn patients of the potential risks to the fetus should the possibility of becoming pregnant exist while receiving flurazepam. Instruct patient to discontinue drug prior to becoming pregnant. Consider the possibility of pregnancy prior to instituting therapy.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. An additive effect may occur if alcohol is consumed the day following use for nighttime sedation. This potential may exist for several days following discontinuation. Caution against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Potential impairment of performance of such activities may occur the day following ingestion. Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, abrupt discontinuation should be avoided with gradual tapering of dosage for those patients on medication for a prolonged period of time. Use caution in administering to addiction-prone individuals or those who might increase dosage.

Precautions: In elderly and debilitated patients, it is recommended that the dosage be limited to 15 mg to reduce risk of oversedation, dizziness, confusion and/or ataxia. Consider potential additive effects with other hypnotics or CNS depressants. Employ usual precautions in severely depressed patients, or in those with latent depression or suicidal tendencies, or in those with impaired renal or hepatic function.

Adverse Reactions: Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported: headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of leukopenia, granulocytopenia, sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations, and elevated SGOT, SGPT, total and direct bilirubins, and alkaline phosphatase; and paradoxical reactions, *e.g.*, excitement, stimulation and hyperactivity.

Dosage: Individualize for maximum beneficial effect. *Adults:* 30 mg usual dosage; 15 mg may suffice in some patients. *Elderly or debilitated patients:* 15 mg recommended initially until response is determined.

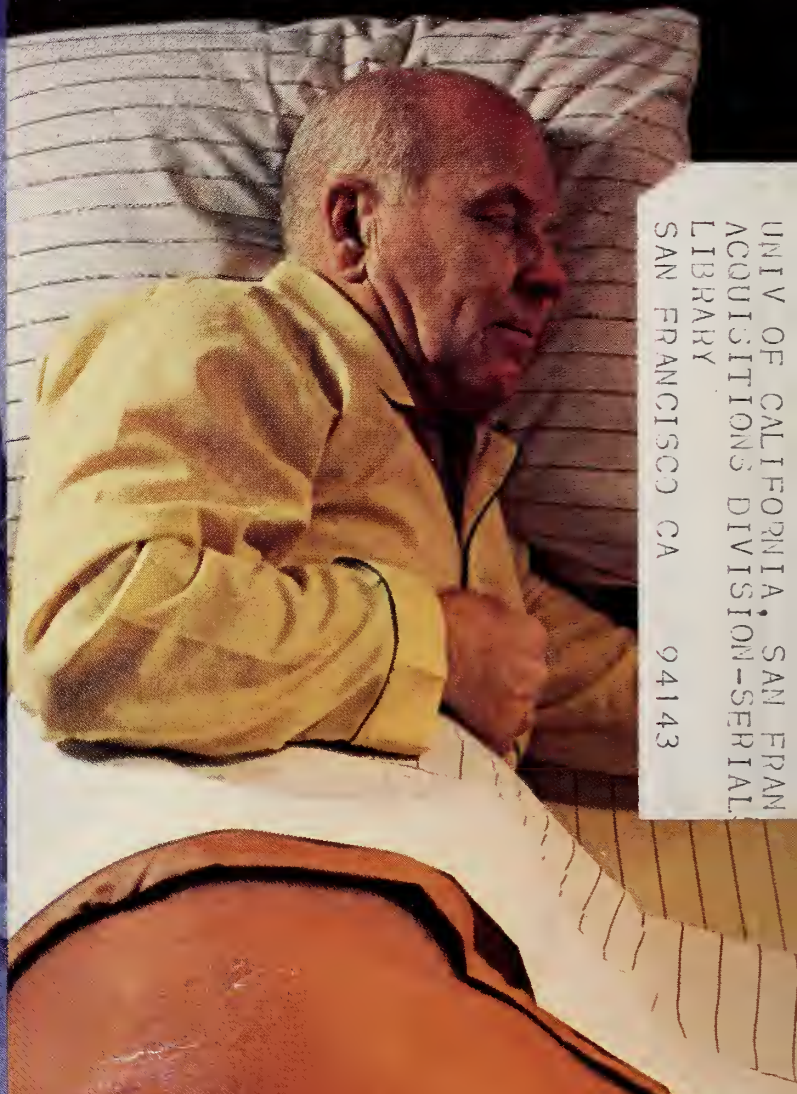
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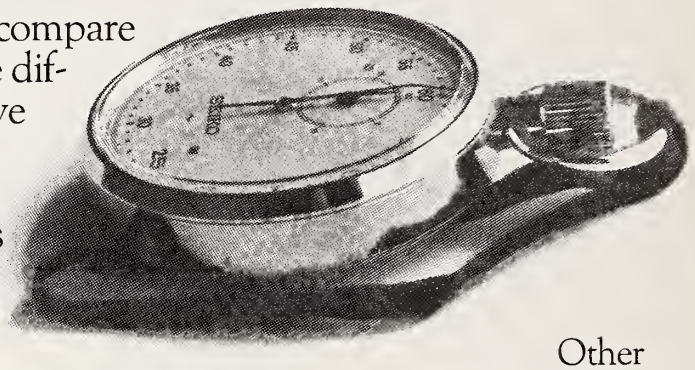
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131st MAG Annual Session
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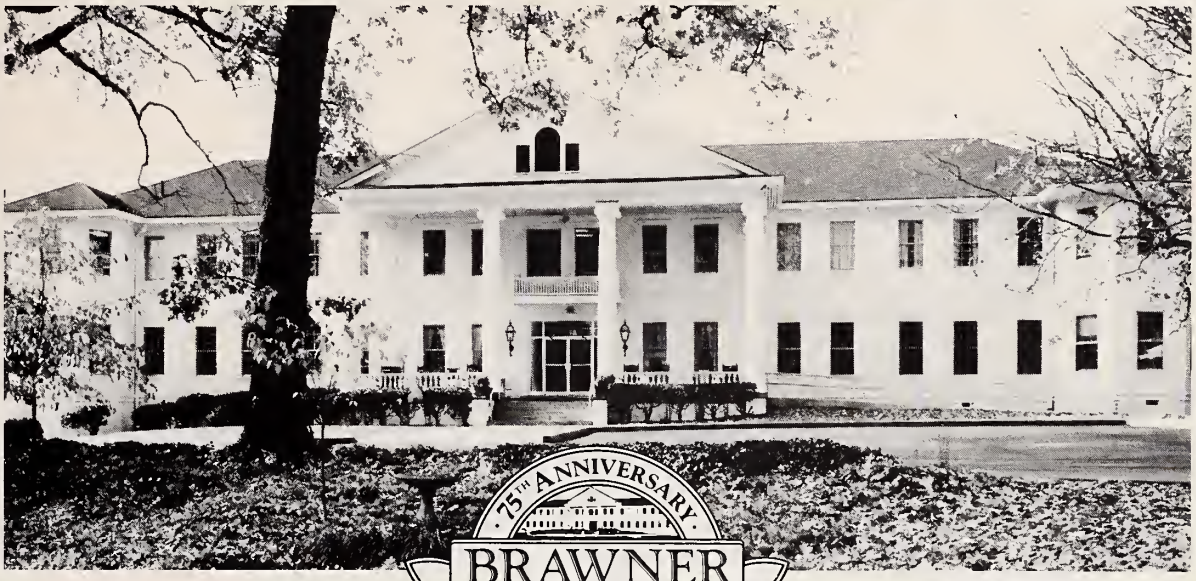
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TELEPHONE
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Dear Colleague:

I want to personally inform you that Ridgeview Institute has expanded its services in psychiatry. As you may know, Ridgeview was founded in 1976 and established as a private, nonprofit, fully accredited psychiatric hospital in suburban Atlanta. Its mission, then and now, is to provide state-of-the-art inpatient treatment for adolescents and adults in psychiatry and in the treatment of chemical dependence. At this time, I am pleased to tell you that Ridgeview has forty (40) beds designated for adult psychiatry and sixty (60) beds designated for adolescent psychiatry. [One hundred (100) beds remain assigned for the adult and adolescent chemical dependence programs.]

The expanded adult psychiatry service is housed in the new Cottage E which offers the advantage of both open and closed therapeutic settings allowing maximum flexibility to the immediate needs of each patient. The adolescent psychiatry service is increasing two-fold and now admits patients aged ten through eighteen. Twenty-four hour admissions are available to both the adult and adolescent programs. Short and longer term treatment needs are capably addressed.

In support of its increased services, Ridgeview has also opened a new Conference Center where professional and public educational programs or conferences shall be hosted or provided. Ridgeview continues to be committed to increasing awareness and expertise in the areas of mental health and chemical dependence problems.

I appreciate the time you have taken to consider this letter. If you wish to have any further information please write or call and ask for Ridgeview Institute's Information and Referral Service at (404) 434-4567.

Sincerely,

Julius Ehik M.D.

Julius Ehik, M.D.
Clinical Director

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of the medical association of georgia

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THE COVER

All Annual Sessions of the MAG consider business vital to the practice of medicine. This year's 131st Annual Session in Savannah is no exception. Of vital importance to patients, employers, and physicians in Georgia is the consideration of alternative medical care delivery plans in general and the Georgia Physicians Organization in particular. Dr. Bill Clark addresses this subject in his President's Letter on p. 125. MAG members are urged to attend and express their views on this and other timely issues to be debated and discussed in April. Dr. Albert A. Carr reviews medical care expenditures and discusses various practice options available to Georgia physicians in his article starting on p. 142. In a related editorial on pp. 164-170, Dr. Dan Jordan discusses some of these issues related to alternative medical care delivery plans discussed at the MAG Leadership Conference last month.

Cover photograph by Chuck Rogers, of Atlanta.

Letters to the Editor . . .

December *Journal*

Dear Editor:

I want to thank you for your help in the publication of our article "Recruitment: For Minority Students by Minority Students" in the December issue of *The Journal of the Medical Association of Georgia.*

The picture of the old Medical College added to the effectiveness of the article. I have received many positive comments and congratulations from my colleagues and associates here at the Medical College. This publication has encouraged me to continue to write.

Again thanks for all your assistance and advice.

Sincerely,
Vera B. Thurmond, Ed.D.
Associate Director

January *Journal*

Dear Editor:

We thoroughly enjoyed the article on Dr. Lois Ellison in the last issue [January 1985] of the *Journal.* She is indeed a most dedicated person, and her contributions to medicine in Georgia will be long remembered as well as her efforts on behalf of the American Lung Association of Georgia.

You are doing a fine job in editing the *Journal,* and a month is not complete until we have received the magazine. Keep up the good work. . . .

Best wishes.
Edwin A. Kramer
Acting Managing Director
American Lung Association of Georgia

Dear Editor:

I enjoyed reading Doctor Van De Water's article, "Georgia's Surgical Leaders," in the January, 1985, issue. I would like to add another individual to Doctor Van De Water's list of surgical leaders from Georgia.

Doctor Lewis M. Flint, Jr., is currently professor and chairman of the department of surgery at the State University of New York in Buffalo. Doctor Flint was born in DeKalb County, Georgia, and I had the pleasure of knowing him when I was a surgical resident at the University of Louisville in Louisville, Kentucky.

If Doctor Van De Water's figures are correct, Georgians are chiefs of surgery in eight of our nation's medical schools rather than seven.

Yours sincerely,
David W. Retterbush, M.D.
Surgeon, Valdosta

Dear Editor:

Thank you for your letter of January 23rd and the copies of the issues of the . . . January . . . *Journal.* I think that they did a fine job in reproducing this painting, and I must compliment your artist on the layout. All too often a publication will take liberties and cut into a painting or superimpose over it. The cover is dignified and elegant. I thank you, and I am happy all of you are pleased with it.

Sincerely,
Lamar Dodd
Artist

Dear Editor:

Congratulations to Zelma Payne for her "Heart Page" article (Jan. '85), which is comfortably dispassionate, accurate, and historical for this region.

As an elder, retired internist/cardiologist, I look back to earlier years of uncritical vassalage to AHA's low-cholesterol-regimen advices, and my extravagant restrictions in patients' diets.

Dr. James Edgar Paullin, one of our pioneer internists, told me, "When I think of the various diets I have put patients on, I'm ashamed of myself." (He, by the way, was an early student of pellagra.)

The chief question is whether impressive reduction of CAHD incidence has to do with advised and implemented dietary change or if some overall disease amelioration can be thanked.

Nutritional emphasis is, in my book, quite important. It seems likely that what we ought to eat has much to do with basal immunity, that which defends against our several diseases.

Yours,
Purcell Roberts, M.D.
Atlanta

Dear Editor,

Your announcement about L. B. Storey's retirement brought out some feelings of sadness at his leaving MAG. They don't make them "like that" anymore. He was an excellent watchdog over our treasury, better than alarm systems, the Atlanta Police, and Ernst & Whinney rolled into one. He was so dedicated and sincere. He was apolitical. When one talked with him in earnest, or asked to keep a confidence, you could relax knowing there would be sealed lips. At my last Finance Committee meeting in Atlanta, after driving over 100 miles on a Saturday and spending the day working, good-hearted L.B. allowed us to pick our lunch at the Varsity and brought it to us. At first I felt how cheap it was, then I realized L.B. didn't have our lunch in his budget and be damned if he was taking us to the Coach and Six!

I wish you years of health, L.B., and I personally will miss you.

Marvyn D. Cohen, M.D.
Pediatrician, Columbus

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See following page for brief summary of prescribing information.

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INDICATIONS AND USAGE: SORBITRATE (isosorbide dinitrate) is indicated for the treatment and prevention of angina pectoris. All dosage forms of isosorbide dinitrate may be used prophylactically to decrease frequency and severity of anginal attacks and can be expected to decrease the need for sublingual nitroglycerin.

The sublingual and chewable forms of the drug are indicated for acute prophylaxis of angina pectoris when taken a few minutes before situations likely to provoke anginal attacks. Because of a slower onset of effect, the oral forms of isosorbide dinitrate are not indicated for acute prophylaxis.

CONTRAINDICATIONS: SORBITRATE is contraindicated in patients who have shown purported hypersensitivity or idiosyncrasy to it or other nitrates or nitrites. Epinephrine and related compounds are ineffective in reversing the severe hypotensive events associated with overdose and are contraindicated in this situation.

WARNINGS: The benefits of SORBITRATE during the early days of an acute myocardial infarction have not been established. If one elects to use organic nitrates in early infarction, hemodynamic monitoring and frequent clinical assessment should be used because of the potential deleterious effects of hypotension.

PRECAUTIONS: General: Severe hypotensive response, particularly with upright posture, may occur with even small doses of SORBITRATE. The drug should therefore be used with caution in subjects who may have blood volume depletion from diuretic therapy or in subjects who have low systolic blood pressure (eg, below 90 mmHg). Paradoxical bradycardia and increased angina pectoris may accompany nitrate-induced hypotension. Nitrate therapy may aggravate the angina caused by hypertrophic cardiomyopathy.

Marked symptomatic, orthostatic hypotension has been reported when calcium channel blockers and organic nitrates were used in combination. Dose adjustment of either class of agents may be necessary.

Tolerance to this drug and cross-tolerance to other nitrates and nitrites may occur. Tolerance to the vascular and antianginal effects of isosorbide dinitrate or nitroglycerin has been demonstrated in clinical trials, experience through occupational exposure, and in isolated tissue experiments in the laboratory. The importance of tolerance to the appropriate use of isosorbide dinitrate in the management of patients with angina pectoris has not been determined. However, one clinical trial using treadmill exercise tolerance (as an end point) found an 8-hour duration of action of oral isosorbide dinitrate following the first dose (after a 2-week placebo washout) and only a 2-hour duration of effect of the same dose after 1 week of repetitive dosing at conventional dosing intervals. On the other hand, several trials have been able to differentiate isosorbide dinitrate from placebo after 4 weeks of therapy and, in open trials, an effect seems detectable for as long as several months.

Tolerance clearly occurs in industrial workers continuously exposed to nitroglycerin. Moreover, physical dependence also occurs since chest pain, acute myocardial infarction, and even sudden death have occurred during temporary withdrawal of nitroglycerin from the workers. In clinical trials in angina patients, there are reports of anginal attacks being more easily provoked and of rebound in the hemodynamic effects soon after nitrate withdrawal. The relative importance of these observations to the routine, clinical use of isosorbide dinitrate is not known. However, it seems prudent to gradually withdraw patients from isosorbide dinitrate when the therapy is being terminated, rather than stopping the drug abruptly.

Information for Patients: Headache may occur during initial therapy with SORBITRATE. Headache is usually relieved by the use of standard headache remedies or by lowering the dose and tends to disappear after the first week or two of use.

Drug Interactions: Alcohol may enhance any marked sensitivity to the hypotensive effect of nitrates.

Isosorbide dinitrate acts directly on vascular smooth muscle; therefore, any other agent that depends on vascular smooth muscle as the final common path can be expected to have decreased or increased effect depending on the agent.

Carcinogenesis, Mutagenesis, Impairment of Fertility: No long-term studies in animals have been performed to evaluate the carcinogenic potential of this drug. A modified two-litter reproduction study in rats fed isosorbide dinitrate at 25 or 100 mg/kg/day did not reveal any effects on fertility or gestation or any remarkable gross pathology in any parent or offspring fed isosorbide dinitrate as compared with rats fed a basal controlled diet.

Pregnancy Category C: Isosorbide dinitrate has been shown to cause a dose-related increase in embryotoxicity (increase in mummified pups) in rabbits at oral doses 35 and 150 times the maximum recommended human daily dose. There are no adequate and well-controlled studies in pregnant women. SORBITRATE should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers: It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when SORBITRATE is administered to a nursing woman.

Pediatric Use: The safety and effectiveness of SORBITRATE in children has not been established.

ADVERSE REACTIONS: Adverse reactions, particularly headache and hypotension, are dose-related. In clinical trials at various doses, the following have been observed:

Headache is the most common (reported incidence varies widely, apparently being dose-related, with an average occurrence of about 25%) adverse reaction and may be severe and persistent. Cutaneous vasodilation with flushing may occur. Transient episodes of dizziness and weakness, as well as other signs of cerebral ischemia associated with postural hypotension, may occasionally develop (the incidence of reported symptomatic hypotension ranges from 2% to 36%). An occasional individual will exhibit marked sensitivity to the hypotensive effects of nitrates and severe responses (nausea, vomiting, weakness, restlessness, pallor, perspiration, and collapse) may occur even with the usual therapeutic dose. Drug rash and/or exfoliative dermatitis may occasionally occur. Nausea and vomiting appear to be uncommon. Case reports of clinically significant methemoglobinemia are rare at conventional doses of organic nitrates. The formation of methemoglobin is dose-related and, in the case of genetic abnormalities of hemoglobin that favor methemoglobin formation, even conventional doses of organic nitrate could produce harmful concentrations of methemoglobin.

DOSAGE AND ADMINISTRATION: For the treatment of angina pectoris, the usual starting dose for sublingual SORBITRATE is 2.5 to 5 mg; for chewable tablets, 5 mg; for oral (swallowed) tablets, 5 to 20 mg; and for controlled-release forms, 40 mg.

SORBITRATE should be titrated upward until angina is relieved or side effects limit the dose. In ambulatory patients, the magnitude of the incremental dose increase should be guided by measurements of standing blood pressure.

The initial dosage of sublingual or chewable SORBITRATE for prophylactic therapy in angina pectoris patients is generally 5 or 10 mg every 2 to 3 hours. Adequate controlled clinical studies demonstrating the effectiveness of chronic maintenance therapy with these dosage forms have not been reported.

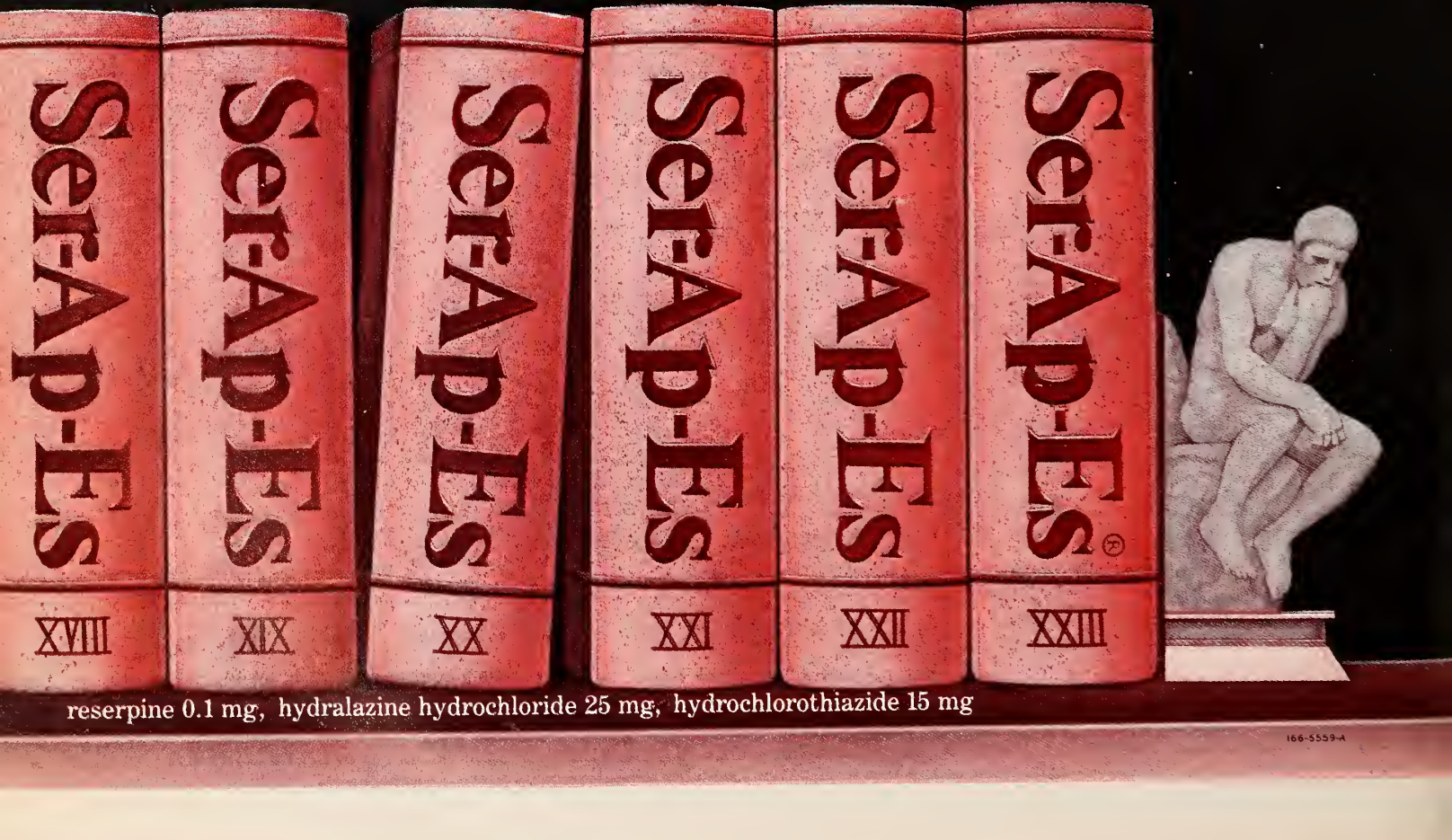
SORBITRATE in oral doses of 10 to 40 mg given every 6 hours or in oral controlled-release doses of 40 to 80 mg given every 8 to 12 hours is generally recommended. The extent to which development of tolerance should modify the dosage program has not been defined. *The oral controlled-release forms of isosorbide dinitrate should not be chewed.*

DOSAGE FORMS AVAILABLE: Sublingual Tablets (2.5, 5, 10 mg); Chewable Tablets (5, 10 mg); Oral Tablets (5, 10, 20, 30, 40 mg); Sustained Action Tablets (40 mg).

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president's letter



The Georgia Physicians Organization

One of the more far-reaching proposals in recent times directly affecting the practice of medicine in Georgia will be considered by the 1985 Annual Session of the MAG House of Delegates to be held this April in Savannah.

This matter first was presented at a special called meeting of the House of Delegates in October, 1984 (only the second called meeting of the House in the entire 135-year history of the MAG). As a result of this meeting, the MAG was directed to develop a business plan for the proposed Physicians Organization to be presented to the 1985 Annual Session to be held in Savannah. An Ad Hoc Steering Committee with wide representation, both geographically and specialty-wise, has been working on the details of the plan.

The concept of a statewide organization of physicians . . . [of this kind] is a new one. No other state has attempted this.

Your House Speaker, with the concurrence of the Annual Session Committee, has assigned the issue of the Georgia Physicians Organization to a special Reference Committee. This committee will hold hearings which do not conflict with other Reference Committee hearings, thus allowing any delegate to attend and to "hear or be heard."

The concept of a statewide organization of physicians which is sponsored by the state medical association, designed to provide medical care and perform peer review under various contractual arrangements, and which is owned and controlled by physicians is a new one. No other state has attempted this. The whole concept is an emotionally charged one, as are many others which affect our pocketbook and personal freedom to practice medicine.

Your MAG Executive Committee has been accused of wanting to form another bureaucracy which we would administer for our own self-aggrandisement instead of practicing medicine. Nothing could be further from the truth. We are not trying to sell anyone on this concept but feel it is important enough to be considered by the representatives of the entire membership . . . your delegates.

The debate will be open and fair and no doubt thorough. The decision must address the special considerations of all parties . . . our patients, their employers, and Georgia physicians.

Personally, I will have no difficulty living with or carrying out the decision, no matter what it is!

S. William Clark

S. William Clark, Jr., M.D.

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References:
1. Strauss WE, McIntyre KM, Parisi AF, et al: Safety and efficacy of diltiazem hydrochloride for the treatment of stable angina pectoris: Report of a cooperative clinical trial. Am J Cardiol 49:560-566, 1982.
2. Pool PE, Seagren SC, Bonanno JA, et al: The treatment of exercise-inducible chronic stable angina with diltiazem: Effect on treadmill exercise. Chest 78 (July suppl):234-238, 1980.

Reduces angina attack frequency*
42% to 46% decrease reported in multicenter study.[1]

Increases exercise tolerance*
In Bruce exercise test,[2] control patients averaged 8.0 minutes to onset of pain; Cardizem patients averaged 9.8 minutes ($P<.005$).

CARDIZEM®
(diltiazem HCl)

THE BALANCED CALCIUM CHANNEL BLOCKER

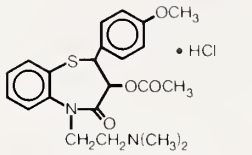
Please see full prescribing information on following page.

PROFESSIONAL USE INFORMATION

cardizem®
(diltiazem HCl)
30 mg and 60 mg tablets

DESCRIPTION

CARDIZEM® (diltiazem hydrochloride) is a calcium ion influx inhibitor (slow channel blocker or calcium antagonist). Chemically, diltiazem hydrochloride is 1,5-Benzothiazepin-4(5H)one,3-(acetyloxy) -5-[2-(dimethylamino)ethyl]-2,3-dihydro-2-(4-methoxyphenyl)-, monohydrochloride,(+) -cis-. The chemical structure is:



Diltiazem hydrochloride is a white to off-white crystalline powder with a bitter taste. It is soluble in water, methanol, and chloroform. It has a molecular weight of 450.98. Each tablet of CARDIZEM contains either 30 mg or 60 mg diltiazem hydrochloride for oral administration.

CLINICAL PHARMACOLOGY

The therapeutic benefits achieved with CARDIZEM are believed to be related to its ability to inhibit the influx of calcium ions during membrane depolarization of cardiac and vascular smooth muscle.

Mechanisms of Action. Although precise mechanisms of its antianginal actions are still being delineated, CARDIZEM is believed to act in the following ways:

1. Angina Due to Coronary Artery Spasm: CARDIZEM has been shown to be a potent dilator of coronary arteries both epicardial and subendocardial. Spontaneous and ergonovine-induced coronary artery spasm are inhibited by CARDIZEM.
2. Exertional Angina: CARDIZEM has been shown to produce increases in exercise tolerance, probably due to its ability to reduce myocardial oxygen demand. This is accomplished via reductions in heart rate and systemic blood pressure at submaximal and maximal exercise work loads.

In animal models, diltiazem interferes with the slow inward (depolarizing) current in excitable tissue. It causes excitation-contraction uncoupling in various myocardial tissues without changes in the configuration of the action potential. Diltiazem produces relaxation of coronary vascular smooth muscle and dilation of both large and small coronary arteries at drug levels which cause little or no negative inotropic effect. The resultant increases in coronary blood flow (epicardial and subendocardial) occur in ischemic and nonischemic models and are accompanied by dose-dependent decreases in systemic blood pressure and decreases in peripheral resistance.

Hemodynamic and Electrophysiologic Effects. Like other calcium antagonists, diltiazem decreases sinoatrial and atrioventricular conduction in isolated tissues and has a negative inotropic effect in isolated preparations. In the intact animal, prolongation of the AH interval can be seen at higher doses.

In man, diltiazem prevents spontaneous and ergonovine-provoked coronary artery spasm. It causes a decrease in peripheral vascular resistance and a modest fall in blood pressure and, in exercise tolerance studies in patients with ischemic heart disease, reduces the heart rate-blood pressure product for any given work load. Studies to date, primarily in patients with good ventricular function, have not revealed evidence of a negative inotropic effect; cardiac output, ejection fraction, and left ventricular end diastolic pressure have not been affected. There are as yet few data on the interaction of diltiazem and beta-blockers. Resting heart rate is usually unchanged or slightly reduced by diltiazem.

Intravenous diltiazem in doses of 20 mg prolongs AH conduction time and AV node functional and effective refractory periods approximately 20%. In a study involving single oral doses of 300 mg of CARDIZEM in six normal volunteers, the average maximum PR prolongation was 14% with no instances of greater than first-degree AV block. Diltiazem-associated prolongation of the AH interval is not more pronounced in patients with first-degree heart block. In patients with sick sinus syndrome, diltiazem significantly prolongs sinus cycle length (up to 50% in some cases).

Chronic oral administration of CARDIZEM in doses of up to 240 mg/day has resulted in small increases in PR interval, but has not usually produced abnormal prolongation. There were, however, three instances of second-degree AV block and one instance of third-degree AV block in a group of 959 chronically treated patients.

Pharmacokinetics and Metabolism. Diltiazem is absorbed from the tablet formulation to about 80% of a reference capsule and is subject to an extensive first-pass effect, giving an absolute bioavailability (compared to intravenous dosing) of about 40%. CARDIZEM undergoes extensive hepatic metabolism in which 2% to 4% of the unchanged drug appears in the urine. In vitro binding studies show CARDIZEM is 70% to 80% bound to plasma proteins. Competitive ligand binding studies have also shown CARDIZEM binding is not altered by therapeutic concentrations of digoxin, hydrochlorothiazide, phenylbutazone, propranolol, salicylic acid, or warfarin. Single oral doses of 30 to 120 mg of CARDIZEM result in detectable plasma levels within 30 to 60 minutes and peak plasma levels two to three hours after drug administration. The plasma elimination half-life following single or multiple drug administration is approximately 3.5 hours. Desacetyl diltiazem is also present in the plasma at levels of 10% to 20% of the parent drug and is 25% to 50% as potent a coronary vasodilator as diltiazem. Therapeutic blood levels of CARDIZEM appear to be in the range of 50 to 200 ng/ml. There is a departure from dose-linearity when single doses above 60 mg are given; a 120-mg dose gave blood levels three times that of the 60-mg dose. There is no information about the effect of renal or hepatic impairment on excretion or metabolism of diltiazem.

INDICATIONS AND USAGE

1. **Angina Pectoris Due to Coronary Artery Spasm.** CARDIZEM is indicated in the treatment of angina pectoris due to coronary artery spasm. CARDIZEM has been shown effective in the treatment of spontaneous coronary artery spasm presenting as Prinzmetal's variant angina (resting angina with ST-segment elevation occurring during attacks).
2. **Chronic Stable Angina (Classic Effort-Associated Angina).** CARDIZEM is indicated in the management of chronic stable angina. CARDIZEM has been effective in controlled trials in reducing angina frequency and increasing exercise tolerance.

There are no controlled studies of the effectiveness of the concomitant use of diltiazem and beta-blockers or of the safety of this combination in patients with impaired ventricular function or conduction abnormalities.

CONTRAINDICATIONS

CARDIZEM is contraindicated in (1) patients with sick sinus syndrome except in the presence of a functioning ventricular pacemaker, (2) patients with second- or third-degree AV block except in the presence of a functioning ventricular pacemaker, and (3) patients with hypotension (less than 90 mm Hg systolic).

WARNINGS

1. **Cardiac Conduction.** CARDIZEM prolongs AV node refractory periods without significantly prolonging sinus node recovery time, except in patients with sick sinus syndrome. This effect may rarely result in abnormally slow heart rates (particularly in patients with sick sinus syndrome) or second- or third-degree AV block (six of 1243 patients for 0.48%). Concomitant use of diltiazem with beta-blockers or digitalis may result in additive effects on cardiac conduction. A patient with Prinzmetal's angina developed periods of asystole (2 to 5 seconds) after a single dose of 60 mg of diltiazem.
2. **Congestive Heart Failure.** Although diltiazem has a negative inotropic effect in isolated animal tissue preparations, hemodynamic studies in humans with normal ventricular function have not shown a reduction in cardiac index nor consistent negative effects on contractility (dp/dt). Experience with the use of CARDIZEM alone or in combination with beta-blockers in patients with impaired ventricular function is very limited. Caution should be exercised when using the drug in such patients.
3. **Hypotension.** Decreases in blood pressure associated with CARDIZEM therapy may occasionally result in symptomatic hypotension.
4. **Acute Hepatic Injury.** In rare instances, patients receiving CARDIZEM have exhibited reversible acute hepatic injury as evidenced by moderate to extreme elevations of liver enzymes. (See PRECAUTIONS and ADVERSE REACTIONS.)

PRECAUTIONS

General. CARDIZEM (diltiazem hydrochloride) is extensively metabolized by the liver and excreted by the kidneys and in bile. As with any new drug given over prolonged periods, laboratory parameters should be monitored at regular intervals. The drug should be used with caution in patients with impaired renal or hepatic function. In subacute and chronic dog and rat studies designed to produce toxicity, high doses of diltiazem were associated with hepatic damage. In special subacute hepatic studies, oral doses of 125 mg/kg and higher in rats were associated with histological changes in the liver which were reversible when the drug was discontinued. In dogs, doses of 20 mg/kg were also associated with hepatic changes; however, these changes were reversible with continued dosing.

Drug Interaction. Pharmacologic studies indicate that there may be additive effects in prolonging AV conduction when using beta-blockers or digitalis concomitantly with CARDIZEM. (See WARNINGS).

Controlled and uncontrolled domestic studies suggest that concomitant use of CARDIZEM and beta-blockers or digitalis is usually well tolerated. Available data are not sufficient, however, to predict the effects of concomitant treatment, particularly in patients with left ventricular dysfunction or cardiac conduction abnormalities. In healthy volunteers, diltiazem has been shown to increase serum digoxin levels up to 20%.

Carcinogenesis, Mutagenesis, Impairment of Fertility. A 24-month study in rats and a 21-month study in mice showed no evidence of carcinogenicity. There was also no mutagenic response in in vitro bacterial tests. No intrinsic effect on fertility was observed in rats.

Pregnancy. Category C. Reproduction studies have been conducted in mice, rats, and rabbits. Administration of doses ranging from five to ten times greater (on a mg/kg basis) than the daily recommended therapeutic dose has resulted in embryo and fetal lethality. These doses, in some studies, have been reported to cause skeletal abnormalities. In the perinatal/postnatal studies, there was some reduction in early individual pup weights and survival rates. There was an increased incidence of stillbirths at doses of 20 times the human dose or greater.

There are no well-controlled studies in pregnant women; therefore, use CARDIZEM in pregnant women only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers. It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, exercise caution when CARDIZEM is administered to a nursing woman if the drug's benefits are thought to outweigh its potential risks in this situation.

Pediatric Use. Safety and effectiveness in children have not been established.

ADVERSE REACTIONS

Serious adverse reactions have been rare in studies carried out to date, but it should be recognized that patients with impaired ventricular function and cardiac conduction abnormalities have usually been excluded.

In domestic placebo-controlled trials, the incidence of adverse reactions reported during CARDIZEM therapy was not greater than that reported during placebo therapy.

The following represent occurrences observed in clinical studies which can be at least reasonably associated with the pharmacology of calcium influx inhibition. In many cases, the relationship to CARDIZEM has not been established. The most common occurrences, as well as their frequency of presentation, are: edema (2.4%), headache (2.1%), nausea (1.9%), dizziness (1.5%), rash (1.3%), asthenia (1.2%), AV block (1.1%). In addition, the following events were reported infrequently (less than 1%) with the order of presentation corresponding to the relative frequency of occurrence.

Cardiovascular:	Flushing, arrhythmia, hypotension, bradycardia, palpitations, congestive heart failure, syncope.
Nervous System:	Paresthesia, nervousness, somnolence, tremor, insomnia, hallucinations, and amnesia.
Gastrointestinal:	Constipation, dyspepsia, diarrhea, vomiting, mild elevations of alkaline phosphatase, SGOT, SGPT, and LDH.
Dermatologic:	Pruritus, petechiae, urticaria, photosensitivity.
Other:	Polyuria, nocturia.

The following additional experiences have been noted:

A patient with Prinzmetal's angina experiencing episodes of vasospastic angina developed periods of transient asymptomatic asystole approximately five hours after receiving a single 60-mg dose of CARDIZEM.

The following postmarketing events have been reported infrequently in patients receiving CARDIZEM: erythema multiforme; leukopenia; and extreme elevations of alkaline phosphatase, SGOT, SGPT, LDH, and CPK. However, a definitive cause and effect between these events and CARDIZEM therapy is yet to be established.

OVERDOSAGE OR EXAGGERATED RESPONSE

Overdosage experience with oral diltiazem has been limited. Single oral doses of 300 mg of CARDIZEM have been well tolerated by healthy volunteers. In the event of overdosage or exaggerated response, appropriate supportive measures should be employed in addition to gastric lavage. The following measures may be considered:

Bradycardia	Administer atropine (0.60 to 1.0 mg). If there is no response to vagal blockade, administer isoproterenol cautiously.
High-Degree AV Block	Treat as for bradycardia above. Fixed high-degree AV block should be treated with cardiac pacing.
Cardiac Failure	Administer inotropic agents (isoproterenol, dopamine, or dobutamine) and diuretics.
Hypotension	Vasopressors (eg, dopamine or levarterenol bitartrate).

Actual treatment and dosage should depend on the severity of the clinical situation and the judgment and experience of the treating physician.

The oral/LO_{50}'s in mice and rats range from 415 to 740 mg/kg and from 560 to 810 mg/kg, respectively. The intravenous LO_{50}'s in these species were 60 and 38 mg/kg, respectively. The oral LD_{50} in dogs is considered to be in excess of 50 mg/kg, while lethality was seen in monkeys at 360 mg/kg. The toxic dose in man is not known, but blood levels in excess of 800 ng/ml have not been associated with toxicity.

DOSAGE AND ADMINISTRATION

Exertional Angina Pectoris Due to Atherosclerotic Coronary Artery Disease or Angina Pectoris at Rest Due to Coronary Artery Spasm. Dosage must be adjusted to each patient's needs. Starting with 30 mg four times daily, before meals and at bedtime, dosage should be increased gradually (given in divided doses three or four times daily) at one- to two-day intervals until optimum response is obtained. Although individual patients may respond to any dosage level, the average optimum dosage range appears to be 180 to 240 mg/day. There are no available data concerning dosage requirements in patients with impaired renal or hepatic function. If the drug must be used in such patients, titration should be carried out with particular caution.

Concomitant Use With Other Antianginal Agents:

1. **Sublingual NTG** may be taken as required to abort acute anginal attacks during CARDIZEM therapy.
2. **Prophylactic Nitrate Therapy**—CARDIZEM may be safely coadministered with short- and long-acting nitrates, but there have been no controlled studies to evaluate the antianginal effectiveness of this combination.
3. **Beta-blockers.** (See WARNINGS and PRECAUTIONS.)

HOW SUPPLIED

Cardizem 30-mg tablets are supplied in bottles of 100 (NDC 0088-1771-47) and in Unit Dose Identification Paks of 100 (NDC 0088-1771-49). Each green tablet is engraved with MARION on one side and 1771 engraved on the other. CARDIZEM 60-mg scored tablets are supplied in bottles of 100 (NDC 0088-1772-47) and in Unit Dose Identification Paks of 100 (NDC 0088-1772-49). Each yellow tablet is engraved with MARION on one side and 1772 on the other.

Issued 4/1/84

Another patient benefit product from

PHARMACEUTICAL DIVISION
MARION LABORATORIES, INC.
KANSAS CITY, MISSOURI 64137

MEDICAL MEETING CALENDAR

MARCH

9-16 — *Breckinridge, CO:* **10th Annual Snow Job in GYN/OB.** Contact Office of CME, Emory Univ. Sch. of Med., 1440 Clifton Rd., NE, Ste. 110, Atlanta 30322. PH:404/329-5695.

13 — *Augusta:* **Antepartum Electronic Fetal Heart Rate Monitoring Theory and Practice.** Category 1 credit. Contact Div. of Cont. Ed., MCG, Augusta 30912. PH:404/828-3967.

18-22 — *Park City, Utah:* **Snowplow Orthopaedics: Selected Topics for the Primary Care Physician.** Category 1 credit. Contact Office of CME, Emory Univ. Sch. of Med., 1440 Clifton Rd., NE, Ste. 110, Atlanta 30322. PH:404/329-5695.

22 — *Columbus:* **Controversies in Cancer Therapy.** Category 1 credit. Contact Janet Bonfiglio, RN, Dir. Prof. Ed., American Cancer Society, Ga. Div., 1422 W. Peachtree St., Atlanta 30309. PH:404/892-0026.

22-23 — *Atlanta:* **Sports Medicine.** Category 1 credit. Contact Dir. of Med. Ed., Morehouse School of Medicine, 740 Westview Dr., SW, Atlanta 30314.

29-30 — *Atlanta:* **Lasers for Ophthalmic Surgery (Argon/Krypton/Yag).** Category 1 credit. Contact Ginger Lineberger, Hallum-Arnold Eye Found., Inc., 3280 Howell Mill Rd., NW, Ste. 104, Atlanta 30327. PH:404/351-2713.

29-31 — *Atlanta:* **American College of Preventive Medicine.** Contact ACPM, 1015 Fifteenth St., NW, Washington, D.C. 20005. PH:202/789-0003.

APRIL

11-12 — *Atlanta:* **Perspectives in Parenteral-Enteral Nutrition: 8th Annual Metabolic Support Service Seminar.** Category 1 credit. Contact Jean Robinson, Pharm.D., Ga. Baptist Med. Ctr., 300 Blvd., NE, Atlanta 30312. PH:404/653-4499.

11-12 — *Atlanta:* **Pharmacology for the Anesthesiologist.** Category 1 credit. Contact Office of CME, Emory Univ. Sch. of Med., 1440 Clifton Rd., NE, Ste. 110, Atlanta 30322. PH:404/329-5695.

13-14 — *Atlanta:* **The Cardiac Patient: Management for Cardiopulmonary Bypass II.** Category 1 credit. Contact Office of CME, Emory Univ. Sch. of Med., 1440 Clifton Rd., NE, Ste. 110, Atlanta 30322. PH:404/329-5695.

13-18 — *Atlanta:* **American Academy of Pediatrics Annual Meeting.** Contact AAP, 1801 Hinman Ave., P.O. Box 1034, Evanston, IL 60204.

17-20 — *Columbus:* **Georgia Association of Pathologists Annual Meeting.** Contact A. Bleakley Chandler, MD, President, GAP, MCG, Augusta 30912. PH:404/828-2923.

19 — *Atlanta:* **Headache and Facial Pain.** Sponsored by the Dept. of Neurology. Category 1 credit. Contact Office of CME, Emory Univ. Sch. of Med., 1440 Clifton Rd., NE, Atlanta 30322. PH:404/329-5695.

20-24 — *Sea Island:* **Masters in GYN/OB.** Category 1 credit. Contact Office of CME, Emory Univ. Sch. of Med., 1440 Clifton Rd., NE, Ste. 110, Atlanta 30322. PH:404/329-5695.

21-25 — *Atlanta:* **American Assn. of Neurological Surgeons Annual Meeting.** Contact AANS, 22 S. Washington St., Park Ridge, IL 60068. PH:312/692-9500.

25-27 — *Atlanta:* **Practical Applications of Computers in Health Care: The Integration of Clinical and Administration Information.** Category 1 credit. Contact Office of CME, Emory Univ. Sch. of Med., 1440 Clifton Rd., NE, Ste. 110, Atlanta 30322. PH:404/329-5695.

25-28 — *Savannah:* **MAG House of Delegates.** Contact MAG, 938 Peachtree St., Atlanta 30309. PH:404/876-7535 or 1-800-282-0224 (toll free in Ga.).

29-May 4 — *Augusta:* **20th Annual Family Practice Symposium.** AMA Category 1 and AAFP prescribed credit. Contact Div. of Cont. Ed., MCG, Augusta 30912. PH:404/828-3967.

MAY

2-5 — *Sea Island:* **Georgia Society of Ophthalmology.** Category 1 credit. Contact Talitha Russell, MAG, 938 Peachtree St., Atlanta 30309. PH:404/876-7535 or 1-800-282-0224 (toll free in Ga.).

3-4 — *Atlanta:* **Second Annual Conference on Primary Care for the Underserved.** Category 1 credit. Contact Dir. of Med. Ed., Morehouse School of Medicine, 740 Westview Dr., SW, Atlanta 30314.

6-10 — *Atlanta:* **Family Medicine Board Review.** Category 1 credit. Contact Office of CME, Emory Univ. Sch. of Med., 1440 Clifton Rd., NE, Suite 110, Atlanta 30322. PH:404/329-5695.

9-12 — *Savannah:* **American Academy of Anesthesia Associates Ninth Annual Meeting, "Neurosurgical Anesthesia and Neurological Monitoring."** Category 1 credit. Contact AAAA, P.O. Box 77253, Atlanta 30357. PH:404/875-1735.

9-12 — *Amelia Island, FL:* **Georgia Radiological Society Annual Meeting.** Category 1 credit. Contact Lloyd B. Schnuck, Jr., M.D., 9 Medical Arts Ctr., Savannah 31405. PH:912/355-3642.

12-16 — *Atlanta:* **American Urological Assn. Annual Meeting.** Contact AUA, 1120 N. Charles St., Baltimore, MD 21201. PH:301/727-1100.

23-24 — *Atlanta:* **Update in Pathology and Laboratory Medicine.** Category 1 credit. Contact Office of CME, Emory Univ. Sch. of Med., 1440 Clifton Rd., NE, Ste. 110, Atlanta 30322. PH:404/329-5695.

23-24 — *Callaway Gardens:* **13th Annual Perinatal Medicine Conference, "Perinatology in Practice: 1985."** Category 1 credit. Contact Div. of Perinatology, The Medical Center, P.O. Box 951, Columbus 31994. PH:404/571-1000.

25 — *Atlanta:* **A Comprehensive Course on the ND:YAG Laser.** Category 1 credit. Contact Ginger Lineberger, Hallum-Arnold Eye Found., Inc., 3280 Howell Mill Rd., NW, Ste. 104, Atlanta 30327. PH:404/351-2713.

The 131st Annual Session of the Medical Association of Georgia

On Thursday, April 25, 1985, the Medical Association of Georgia's House of Delegates will convene at 8:00 p.m. at the Hyatt Regency Hotel in Savannah. It will be preceded by a General Session of MAG members at 7:00 p.m.

Hotel Reservations

The Hyatt Regency Hotel is the headquarters for this meeting. All MAG delegates, alternate delegates, and officers have received hotel reservation cards from MAG Headquarters. All others must make reservations directly with the hotel. The address is: Hyatt Regency Savannah, Two West Bay Street, Savannah, GA 31401. Phone: 912-238-1234.

Registration

Registration facilities will be maintained in the hotel for the delegates, alternate delegates, directors, and all members. The registration schedule will be as follows:

Thursday, April 25 . . . 3:00 p.m.-7:00 p.m.

Friday, April 26 . . . 7:30 a.m.-12:00 noon

Saturday, April 27 . . . 8:30 a.m.-5:00 p.m.

Message Center

The Auxiliary to the MAG will maintain a message desk in the hotel for the convenience of the membership. The messages will be posted on a bulletin board at the message desk.

General Session

This Annual Session will confine itself to the business affairs of the Association. By House of Delegates action in 1973, the scientific portion of the meeting was separated from the business portion and is held in November of each year.

The opening General Session will be called to order by MAG's president, S. William Clark, Jr., M.D., on Thursday, April 25, at 7:00 p.m. in the Ballroom. Featured at this opening ceremony will be the presentation of awards by the MAG President, S. William Clark, Jr., M.D., and the report of the President of the Auxiliary to MAG, Mrs. Ann Smith (Robley). Additionally, Joseph F. Boyle, M.D., President of the AMA will address the House.

The Second General Session will be held following adjournment of the House of Delegates. Newly elected officers will be installed during the Second General Session.

House of Delegates

The First Session of the House of Delegates will convene on Thursday, April 25, at 8:00 p.m. in the Ballroom. Nominations for MAG officers will be made, and reports of officers and committees will be presented. Resolutions and other new business will be placed before the House. Reference Committees will be appointed, and all resolutions and reports as required will be referred by the Speaker to the appropriate Reference Committees.

The Second Session of the House of Delegates will convene at 9:00 a.m. on Saturday, April 27, in the Ballroom. Reference Committees will report to the House at this time.

Harrison L. (Jack) Rogers, Jr., M.D., President-elect of the AMA, will deliver the keynote address to open this Session. Also, MAG President Dr. Clark and MAG President-elect William D. Logan, Jr., M.D., will address the group.

Reference Committees

According to the Bylaws of the Association, all resolutions and reports which contain recommendations must be referred to a Reference Committee for open hearings. All members are invited and encouraged to appear before the Reference Committees to express their views. The Committees will open their hearings on Friday, April 26, at 9:00 a.m.

Election of Officers

Nominations for the officers of the Association will be made during the First Session of the House of Delegates on Thursday, April 25.

The election will take place during the House on Saturday morning, April 27. The Tellers will pass out,



Savannah is home port to the Barba Negra, an 1896 three-masted square rigger, which is docked at the city's busy restored Riverfront Plaza. (Photo courtesy of Savannah Area Convention and Visitors Bureau.)

collect, and count the ballots, and the results will be announced when the House reconvenes after the lunch break. All newly elected officers will be installed during the meeting on Saturday.

President's Reception

The MAG will honor its president at a reception and dance beginning at 7:00 p.m., Saturday, April 27.

Alumni Events

Receptions and dinners sponsored by the various medical school alumni organizations are often held during the Annual Session. Notice will be made prior to the Annual Session.

GaMPAC Breakfast

GaMPAC will sponsor a breakfast on Friday morning, April 26, at 7:30 a.m. in the hotel.

Criteria for Selection of Recipients of MAG Awards

Hardman Cup

This award is presented for "the active achievement of anyone who in the judgement of the Association has solved any outstanding problem in public health or made any discovery in medicine or surgery" or such contribution to the science of medicine. The recipient of this award will be selected by a five-man secret committee. Nominations for this award are to be made by component county medical societies, and all nominations must be accompanied by supporting biographic data. The deadline for receipt of nominations was March 1. If no nominations and supporting data are received, no award will be made. No nominations for this award will be accepted from the floor. If given, this award will be presented on Thursday, April 25. By custom, this award usually has gone to a Georgia physician; however, this is not required by the terms of the letter from Governor Hardman establishing this award.

Distinguished Service

The Distinguished Service Award is presented for distinguished and meritorious service which reflects credit and honor on the Association. Nominations for this award should be made by component county medical societies. They must be accompanied by biographic data supporting the nomination. The deadline for receipt of nominations was March 1. The recipient will be selected by a five-man secret committee and presentation will be made on Thursday, April 25.

Civic Endeavor Award

This award, presented for the first time at the 1969 Annual Session, will be given pursuant to an action taken by the 1968 House of Delegates in Augusta. This award is to be given for outstanding public service and participation in civic activities. Component county medical societies are invited to make nominations for this award supported by appropriate data which must have been received at MAG Headquarters no later than March 1. The recipient of this award will be selected by a three-man secret committee which will determine if the nominees meet the requirements of the resolution which created this award. Presentation will be made on Thursday, April 25.

Family Physician of the Year

This award is presented to an outstanding family physician in Georgia. Presentation of the award is made at the Annual Session. The president of the Georgia Academy of Family Physicians (or his designee in the event of his absence) will present this award on Thursday, April 25.

Directors and Alternate Directors

District	*Director*	*Alternate Directors*	*Term Ending*
1	Leon E. Curry, Metter	Douglas Cope, Statesboro	1985
2	Sammie Dixon, Tifton	Lannie Copeland, Moultrie	1985
3	Virgle W. McEver, Jr., Warner Robins	Wentford A. Spears, Warner Robins	1985
6	Samuel A. Brewton, Jr., Thomaston	Norman P. Gardner, Thomaston	1986
7	Bannester L. Harbin, Rome	John Atha, Rockmart	1986
8	Joe C. Stubbs, Valdosta	S. William Clark, Jr., Waycross	1987
9	Rupert H. Bramblett, Cumming	C. Peter Lampros, Toccoa	1987
10	William M. Headley, Milledgeville	Charles Wills, Washington	1985
Bibb County Medical Society			
	Beverly B. Sanders, Macon	Charles A. Lanford, Macon	1987
Clayton-Fayette Medical Society			
	Selwyn T. Hartley, Riverdale	F. Peter Nicholson, Riverdale	1987
Cobb County Medical Society			
	Dan B. Stephens, Marietta	Ronald Roper, Marietta	1985
Crawford W. Long Medical Society			
	William C. Holmes, Athens	E. Van Herrin, Athens	1985
DeKalb Medical Society			
	H. Duane Blair, Decatur	Charles W. McDowell, Jr., Decatur	1987
Dougherty County Medical Society			
	Frank F. Middleton, III, Albany	Carl V. Hancock, Jr., Albany	1986
Floyd-Polk-Chattooga Medical Society			
	Robert A. Farrell, Rome	Joel Todino, Rome	1987
Hall County Medical Society			
	John Reed, Gainesville	James H. Leigh, Jr., Gainesville	1986
Medical Association of Atlanta			
	William C. Collins, Atlanta	Bob G. Lanier, Atlanta	1986
	T. J. Anderson, Jr., Atlanta	W. Ben Spearman, Atlanta	1987
	J. Harold Harrison, Atlanta	William C. Waters, III, Atlanta	1985
Georgia Medical Society			
	Joe L. Nettles, Savannah	Clyde L. Olson, Savannah	1985
Muscogee County Medical Society			
	Jack A. Raines, Columbus	E. M. (Mac) Molnar, Columbus	1986
Richmond County Medical Society			
	Luther M. Thomas, Augusta	Sumner Fishbein, Augusta	1987
	James L. O'Quinn, Augusta	Donald C. Abele, Augusta	1987

MAG Delegates to AMA

Delegates	*Term Ending*
J. Dan Bateman, Albany	12/31/86
C. Emory Bohler, Brooklet	12/31/85
H. Hilt Hammett, Jr., LaGrange	12/31/86
William W. Moore, Jr., Atlanta	12/31/85
Carson B. Burgstiner, Savannah	12/31/86
Charles D. Hollis, Jr., Albany	12/31/85

Alternate Delegates	*Term Ending*
S. William Clark, Jr., Waycross	12/31/86
Joe C. Stubbs, Valdosta	12/31/86
C. Peter Lampros, Toccoa	12/31/85
James H. Sullivan, Columbus	12/31/86
L. Newton Turk, III, Atlanta	12/31/85
Virgle W. McEver, Jr., Warner Robins	12/31/85

MAG Board of Directors

Office		*Term Ending*
**President*	S. William Clark, Jr., Waycross	1985
**President-elect*	William D. Logan, Jr., Atlanta	1985
**Immediate Past President*	William W. Moore, Jr. Atlanta	1985
Past President	Charles D. Hollis, Jr., Albany	1985
Past President	L. Newton Turk, III, Atlanta	1985
**First Vice President*	John D. Watson, Jr., Columbus	1985
**Second Vice President*	Joseph P. Bailey, Augusta	1985
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**Speaker of The House*	Jack F. Menendez, Macon	1986
**Vice Speaker of the House*	James A. Kaufmann, Atlanta	1986
Vice Chairman, Board of Directors	William C. Collins, Atlanta	1985
**Editor* (JMAG) *(Ex-officio)*	Edgar Woody, Atlanta	1985

*(Denotes Executive Committee)

Dr. Rogers to Address House

Harrison L. (Jack) Rogers, Jr., M.D., general surgeon from Atlanta and President-elect of the American Medical Association, will deliver the keynote address to the 1985 MAG House of Delegates.

Long active in the Medical Association of Georgia, Dr. Rogers has served as Vice Speaker and Speaker of the House of Delegates, as a member of the Board of Trustees, and chairman of several committees. In June, 1981, Dr. Rogers received the MAG's Distinguished Service Award. He has also served as President of the Medical Association of Atlanta. He was elected Speaker of the AMA House of Delegates in 1981, and prior to that, served as Vice Speaker.

Dr. Rogers received his M.D. degree from Emory University School of Medicine. He interned at Yale and served his residency at Boston Veterans Administration Hospital. In 1983, he was presented with the Award of Honor by the Emory University Medical Alumni Association.



In addition to being on the active and teaching staffs at Crawford Long and Piedmont Hospitals in Atlanta, Dr. Rogers is a Clinical Assistant Professor in the Department of Surgery at Emory, a Diplomate of the American Board of Surgery, and a Fellow of the American College of Surgeons.

Dr. Rogers is a charter member of the Southeastern Speakers Association, a former member of the American Red Cross Board of Directors, Past President of the Atlanta Clinical Society, and a former member of the Board of Directors and Treasurer of Blue Shield of Georgia/Atlanta. In 1980, he was elected an alumnus member of the Emory Chapter of Alpha Omega Alpha fraternity. Married, with four children, he lives in Atlanta.

"It is a significant year in the history of MAG to have one of our own, who served as Speaker and Vice Speaker of the MAG House of Delegates, come back to address our House as President-elect of the National physicians' organization. We are proud of Jack and wish him well in his upcoming term."

S. William Clark, Jr., M.D.
President, MAG

Component County Society Representation to the 1985 MAG House of Delegates

(1984 CMS Member Count for 1985 Delegates to Annual Session)

County Medical Society	*Number of Delegates*
Altamaha	1
Baldwin	3
Barrow	1
Bartow	1
Ben Hill-Irwin	1
Bibb	12
Blue Ridge	1
Burke	1
Camden-Charlton	1
Carroll-Haralson	2
Cherokee-Pickens	1
Clayton-Fayette	5
Cobb	12
Coffee	1
Colquitt	2
Coweta	2
Crawford W. Long	5
Decatur-Seminole	1
DeKalb	13
Dougherty	6
Douglas	1
Elbert	1
Emanuel	1
Flint	1
Floyd-Polk-Chattooga	5
Franklin	1
Georgia Medical Society	11
Glynn	4
Gordon	1
Gwinnett-Forsyth	3
Habersham	1
Hall	5
Hart	1
Henry	1
Jackson-Banks	1
Jefferson	1
Laurens	2
Lumpkin	1
McDuffie	1
Medical Association of Atlanta	57
Meriwether-Harris-Talbot	1
Mitchell	1
Muscogee	10
Newton-Rockdale	2
Oconee Valley	1
Ocmulgee	1
Ogeechee River	2
Peach Belt	3
Randolph-Stewart-Terrell	1
Richmond	18
Screven	1
South Georgia	4
Southeast Georgia	1
Southwest Georgia	1
Spalding	2
Stephens-Rabun	2
Sumter	2
St. John's Parish	1
Thomas Area	3
Tift	2
Troup	3
Upson	1
Walker-Catoosa-Dade	2
Walton	1
Ware	3
Washington	1
Wayne	1
Whitfield-Murray	3
Wilkes	1
Worth	1
Hospital Medical Staff Section	1



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OFFICIA

MAG House of Delegates
Hyatt Regency Hotel
Savannah

THURSDAY, APRIL 25

4:00 p.m. to 7:00 p.m.	REGISTRATION Delegates and other Session attendees Location: Foyer
7:00 p.m.	GENERAL SESSION Location: Regency Ballroom Presiding: S. William Clark, Jr., M.D., President Opening Ceremonies Speaker: Joseph F. Boyles, M.D., President of the AMA Report of the President of the Auxiliary to the MAG, Mrs. Robley D. Smith of Tifton Presentation of MAG Awards Announcements Recess
8:00 p.m. to 10:00 p.m.	HOUSE OF DELEGATES, FIRST SESSION Location: Regency Ballroom Presiding, Jack F. Menendez, M.D., Speaker, and James A. Kaufmann, M.D., Vice Speaker Presentation, Correction, and Adoption of the Minutes of the 1984 House of Delegates Appointment of Convention Committees

ROGRAM

Nominations for Association Officers and AMA Delegates
Reports of Officers and Committees
Introduction of New Business
Announcements
Recess

FRIDAY, APRIL 26

7:30 a.m. REGISTRATION
Location: Foyer

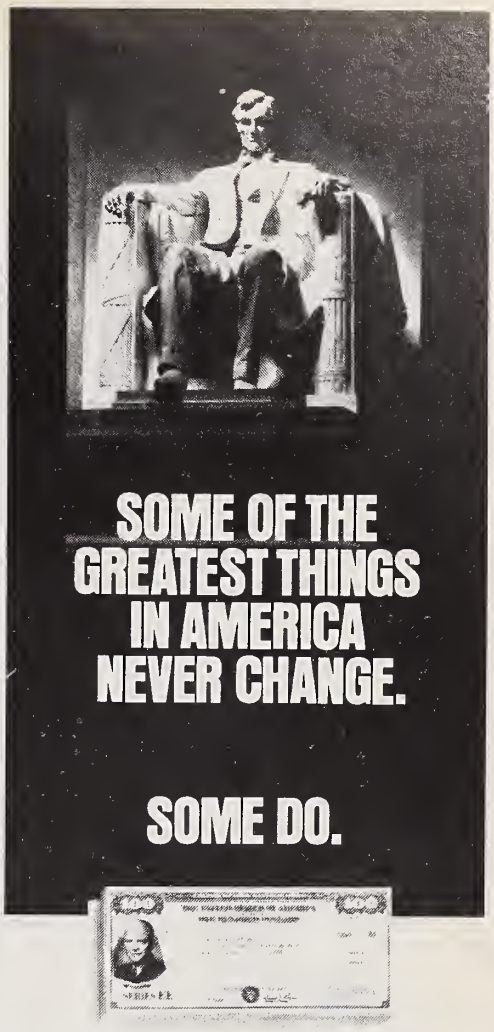
9:00 a.m. REFERENCE COMMITTEE HEARINGS

SATURDAY, APRIL 27

8:00 a.m. REGISTRATION
Location: Foyer

9:00 a.m. HOUSE OF DELEGATES, SECOND SESSION
Location: Regency Ballroom
Keynote Address: Harrison L. (Jack) Rogers, Jr., M.D., President-elect of the AMA
Speakers: F. William Clark, Jr., M.D., President of the MAG, and William D. Logan, Jr., M.D., President-elect of the MAG

7:00 p.m. PRESIDENT'S RECEPTION AND DANCE



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U.S. Savings Bonds now pay like money market accounts! At the current rate—10.94%—you could double your money in less than seven years. Just hold Bonds for five years and you get the new higher variable rates. Plus, you get a guaranteed return. That's the kind of change anyone can appreciate.

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Board Certified physicians or finishing residents in the following specialties who desire an attractive alternative to civilian practice:

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NEUROSURGERY
OTOLARYNGOLOGY
CHILD PSYCHIATRY
PEDIATRICS
MEDICAL RESEARCH
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HQ, US Army Forces Command
Building 128
Fort McPherson, GA 30330
(404) 752-3611



AFTER BREAKTHROUGH BLEEDING AND AMENORRHEA...
SHE'S ABOUT TO GIVE UP ON ORAL CONTRACEPTION.

NORLESTRIN®

(1 mg norethindrone acetate and 50 mcg ethinyl estradiol tablets, USP) 1/50

BECAUSE SOMETIMES A 50 IS PREFERABLE.

See next page for brief summary of prescribing information.

Brief Summary of Prescribing Information
NORLESTRIN® (norethindrone acetate and ethinyl estradiol tablets, USP)

See section under **Special Notes on Administration and HOW SUPPLIED.**
Before prescribing, please see full prescribing information. A Brief Summary follows.

DESCRIPTION
Norlestrin Products are progestogen-estrogen combinations.

INDICATIONS AND USAGE
Norlestrin Products are indicated for the prevention of pregnancy in women who elect to use oral contraceptives as a method of contraception.

In clinical trials with Norlestrin 1/50 involving 25,983 therapy cycles, there was a pregnancy rate of 0.05 per 100 woman-years; in clinical trials with Norlestrin 2.5/50 involving 96,388 cycles, there was a pregnancy rate of 0.22 per 100 woman-years.

Dose-Related Risk of Thromboembolism from Oral Contraceptives: Studies have shown a positive association between the dose of estrogens in oral contraceptives and the risk of thromboembolism. It is prudent and in keeping with good principles of therapeutics to minimize exposure to estrogen. The oral contraceptive prescribed for any given patient should be that product which contains the least amount of estrogen that is compatible with an acceptable pregnancy rate and patient acceptance.

CONTRAINDICATIONS
1. Thrombophlebitis or thromboembolic disorders
2. A past history of deep-vein thrombophlebitis or thromboembolic disorders
3. Cerebral vascular or coronary artery disease
4. Known or suspected carcinoma of the breast
5. Known or suspected estrogen-dependent neoplasia
6. Undiagnosed abnormal genital bleeding
7. Known or suspected pregnancy (See WARNING No. 5)
8. Benign or malignant liver tumor which developed during the use of oral contraceptives or other estrogen-containing products.

WARNINGS

Cigarette smoking increases the risk of serious cardiovascular side effects from oral contraceptive use. The risk increases with age and with heavy smoking (15 or more cigarettes per day) and is quite marked in women over 35 years of age. Women who use oral contraceptives should be strongly advised not to smoke.

The use of oral contraceptives is associated with increased risk of several serious conditions including thromboembolism, stroke, myocardial infarction, hepatic adenoma, gallbladder disease, and hypertension. Practitioners prescribing oral contraceptives should be familiar with the following information relating to these risks.

1. *Thromboembolic Disorders and Other Vascular Problems.* An increased risk of thromboembolic and thrombotic disease associated with the use of oral contraceptives is well-established. Studies have demonstrated an increased risk of fatal and nonfatal venous thromboembolism and stroke, both hemorrhagic and thrombotic.

Cerebrovascular Disorders: In a collaborative study in women with and without predisposing causes, it was estimated that the risk of hemorrhagic stroke was 2.0 times greater in users than nonusers, and the risk of thrombotic stroke was 4.0 to 9.5 times greater.

Myocardial Infarction: An increased risk of myocardial infarction associated with oral contraceptives has been reported confirming a previously suspected association. These studies found that the greater the number of underlying risk factors (cigarette smoking, hypertension, hypercholesterolemia, obesity, diabetes, history of preeclamptic toxemia) for coronary artery disease, the higher the risk of developing myocardial infarction, regardless of whether the patient was an oral contraceptive user or not. Oral contraceptives, however, were found to be a clear additional risk factor.

It has been estimated that users who do not smoke (smoking is considered a major predisposing condition to myocardial infarction) are about twice as likely to have a fatal myocardial infarction as nonusers who do not smoke. Oral contraceptive users who are smokers have about a fivefold increased risk of fatal infarction compared to users who do not smoke, but about a tenfold to twelvefold increased risk compared to nonusers who do not smoke. The amount of smoking is also an important factor.

Risk of Dose: In an analysis of data, British investigators concluded that the risk of thromboembolism, including coronary thrombosis, is directly related to the dose of estrogen used in oral contraceptives; however, the quantity of estrogen may not be the sole factor involved.

Persistence of Risk: Two studies have suggested that an increased risk may persist for as long as 6 years after discontinuation of oral contraceptive use for cerebrovascular disease and 9 years for myocardial infarction. In addition, a prospective study suggested the persistence of risk for subarachnoid hemorrhage.

Estimate of Excess Mortality from Circulatory Diseases: The risk of diseases of the circulatory system is concentrated in older women, in those with a long duration of use, and in cigarette smokers.

A study of available data from a variety of sources concluded that the mortality associated with all methods of birth control is low and below that associated with childbirth, with the exception of oral contraceptives in women over 40 who smoke.

The risk of thromboembolic and thrombotic diseases associated with oral contraceptives increases with age after approximately age 30 and, for myocardial infarction, is further increased by hypertension, hypercholesterolemia, obesity, diabetes, or history of preeclamptic toxemia, and especially by cigarette smoking.

The physician and the patient should be alert to the earliest manifestations of thromboembolic and thrombotic disorders. Should any occur or be suspected, the drug should be discontinued immediately.

A fourfold to sixfold increased risk of postsurgery thromboembolic complications has been reported in users. If feasible, oral contraceptives should be discontinued at least four weeks before surgery of a type associated with an increased risk of thromboembolism or prolonged immobilization.

2. *Ocular Lesions.* Neuro-ocular lesions, such as optic neuritis or retinal thrombosis, have been associated with the use of oral contraceptives. Discontinue the oral contraceptive if there is unexplained sudden or gradual, partial, or complete loss of vision; onset of proptosis or diplopia; papilledema; or retinal vascular lesions.

3. *Carcinoma.* Long-term continuous administration of estrogen in certain animal species increases the frequency of carcinoma of the breast, cervix, vagina, and liver.

In humans, an increased risk of endometrial carcinoma associated with the prolonged use of exogenous estrogen in postmenopausal women has been reported. However, there is no evidence suggesting increased risk of endometrial cancer in users of conventional combination or progestogen-only oral contraceptives.

Studies found no evidence of increase in breast cancer in women taking oral contraceptives; however, an excess risk in users with documented benign breast disease was reported.

There is no confirmed evidence of an increased risk of cancer associated with oral contraceptives. Close clinical surveillance of users is, nevertheless, essential. In cases of undiagnosed persistent or recurrent abnormal vaginal bleeding, appropriate diagnostic measures should be taken to rule out malignancy. Women with a strong family history of breast cancer, or who have breast nodules, fibrocystic disease, or abnormal mammograms, should be monitored with particular care.

4. *Hepatic Tumors.* Benign hepatic adenomas have been found to be associated with oral contraceptives. Because hepatic adenomas may rupture and may cause death through intra-abdominal hemorrhage, they should be considered in women presenting abdominal pain and tenderness, abdominal mass, or shock.

A few cases of hepatocellular carcinoma have been reported in women taking oral contraceptives. The relationship of these drugs to this type of malignancy is not known at this time.

5. *Usage in or Immediately Preceding Pregnancy; Birth Defects in Offspring, and Malignancy in Female Offspring.* During early pregnancy, female sex hormones may seriously damage the offspring.

An increased risk of congenital anomalies, including heart defects and limb defects, has been reported with the use of oral contraceptives in pregnancy.

There is some evidence that triploidy and possible other types of polyploidy are increased among abortuses from women who become pregnant soon after ceasing oral contraceptives.

Pregnancy should be ruled out before continuing an oral contraceptive in any patient who has missed two consecutive menstrual periods. If the patient has not adhered to the schedule, the possibility of pregnancy should be considered at the time of the first missed period, and oral contraceptives should be withheld until pregnancy has been ruled out. If pregnancy is confirmed, the patient should be apprised of the potential risks to the fetus and the advisability of continuation of the pregnancy should be discussed.

Women who discontinue oral contraceptives with the intent of becoming pregnant should use an alternate form of contraception for a period of time before attempting to conceive.

Administration of progestogen-only or progestogen-estrogen combinations to induce withdrawal bleeding should not be used as a test of pregnancy.

6. *Gallbladder Disease.* Studies report an increased risk of surgically confirmed gallbladder disease in users of oral contraceptives.

7. *Carbohydrate and Lipid Metabolic Effects.* Because decreased glucose tolerance has been observed in a significant percentage of patients, prediabetic and diabetic patients should be carefully observed while receiving oral contraceptives.

An increase in triglycerides and total phospholipids has been observed.

8. *Elevated Blood Pressure.* An increase in blood pressure has been reported in patients receiving oral contraceptives. The prevalence in users increases with longer exposure. Age is also strongly correlated with development of hypertension. Women who previously have had hypertension during pregnancy may be more likely to develop elevation of blood pressure.

9. *Headache.* Onset or exacerbation of migraine or development of headache of a new pattern which is recurrent, persistent, or severe, requires discontinuation of oral contraceptives.

10. *Bleeding Irregularities.* Breakthrough bleeding, spotting, and amenorrhea are frequent reasons for patients discontinuing oral contraceptives. In breakthrough bleeding, nonfunctional causes should be borne in mind. In undiagnosed abnormal bleeding from the vagina, adequate diagnostic measures are indicated to rule out pregnancy or malignancy.

Women with a past history of oligomenorrhea or secondary amenorrhea, or young women without regular cycles should be advised that they may have a tendency to remain anovulatory or to become amenorrheic after discontinuation of oral contraceptives.

11. *Ectopic Pregnancy.* Ectopic as well as intrauterine pregnancy may occur in contraceptive failures.

12. *Breast-Feeding.* Oral contraceptives may interfere with lactation. Furthermore, a small fraction of the hormonal agents in oral contraceptives has been identified in the milk of mothers receiving these drugs.

PRECAUTIONS
1. A complete medical and family history should be taken prior to the initiation of oral contraceptives. The pretreatment and periodic physical examinations should include special reference to blood pressure, breasts, abdomen, and pelvic organs, including Papanicolaou smear and relevant laboratory tests. As a general rule, oral contraceptives should not be prescribed for longer than one year without another examination.
2. Preexisting uterine leiomyomata may increase in size.
3. Patients with a history of psychic depression should be carefully observed and the drug discontinued if depression recurs to a serious degree.
4. Oral contraceptives may cause fluid retention and should be prescribed with caution, and only with careful monitoring, in patients with conditions which might be aggravated.
5. Patients with a past history of jaundice during pregnancy have an increased risk of recurrence of jaundice. If jaundice develops, the medication should be discontinued.
6. Steroid hormones may be poorly metabolized and should be administered with caution in patients with impaired liver function.
7. Users may have disturbances in normal tryptophan metabolism, which may result in a relative pyridoxine deficiency.
8. Serum folate levels may be depressed.
9. The pathologist should be advised of oral contraceptive therapy when relevant specimens are submitted.
10. Certain endocrine and liver function tests and blood components may be affected. (a) Increased sulfobromophthalein retention. (b) Increased prothrombin and factors VII, VIII, IX, and X; decreased antithrombin 3; increased norepinephrine-induced platelet aggregability. (c) Increased thyroid-binding globulin (TBG) leading to increased circulating total thyroid hormone. (d) Decreased pregnanediol excretion. (e) Reduced response to metyrapone test.

Drug Interactions: Reduced efficacy and increased incidence of breakthrough bleeding have been associated with concomitant use of rifampin. A similar association has been suggested with barbiturates, phenylbutazone, phenytoin sodium, tetracycline, and ampicillin.

ADVERSE REACTIONS
An increased risk of the following serious adverse reactions has been associated with oral contraceptives: thrombophlebitis; pulmonary embolism; coronary thrombosis, cerebral thrombosis; cerebral hemorrhage; hypertension; gallbladder disease; benign hepatomas; congenital anomalies.

There is evidence of an association between the following conditions and the use of oral contraceptives, although additional confirmatory studies are needed: mesenteric thrombosis, neuro-ocular lesions, eg, retinal thrombosis and optic neuritis.

The following adverse reactions have been reported in patients receiving oral contraceptives and are believed to be drug related: nausea and/or vomiting, usually the most common adverse reactions, occur in approximately 10% or less of patients during the first cycle. Other reactions, as a general rule, are seen much less frequently or only occasionally: gastrointestinal symptoms; breakthrough bleeding, spotting; change in menstrual flow: dysmenorrhea; amenorrhea during and after treatment; temporary infertility after discontinuance of treatment; edema; chloasma or melasma; breast changes; change in weight; change in cervical erosion and cervical secretion; possible diminution in lactation when given immediately postpartum; cholestatic jaundice; migraine; increase in size of uterine leiomyomata, rash (allergic); mental depression; reduced tolerance to carbohydrates; vaginal candidiasis; change in corneal curvature; intolerance to contact lenses.

The following adverse reactions have been reported and the association has been neither confirmed nor refuted: premenstrual-like syndrome; cataracts; changes in libido; chorea; changes in appetite; cystitis-like syndrome; headache; nervousness; dizziness; hirsutism; loss of scalp hair; erythema multiforme; erythema nodosum; hemorrhagic eruption; vaginitis; porphyria.

Special Notes on Administration
Menstruation usually begins two or three days, but may begin as late as the fourth or fifth day, after discontinuing medication.

After several months on treatment, bleeding may be reduced to a point of virtual absence; reduced flow may be a result of medication and not indicative of pregnancy.

HOW SUPPLIED
Norlestrin 21 1/50 is available in compacts each containing 21 tablets. Each tablet contains 1 mg of norethindrone acetate and 50 mcg of ethinyl estradiol. Available in packages of five compacts and packages of five refills.

Norlestrin 21 2.5/50 is available in compacts each containing 21 tablets. Each tablet contains 2.5 mg of norethindrone acetate and 50 mcg of ethinyl estradiol. Available in packages of five compacts and packages of five refills.

Norlestrin Fe 1/50 is available in compacts each containing 21 yellow tablets and 7 brown tablets. Each yellow tablet contains 1 mg of norethindrone acetate and 50 mcg of ethinyl estradiol. Each brown tablet contains 75 mg of ferrous fumarate, USP. Available in packages of five compacts and packages of five refills.

Norlestrin FE 2.5/50 is available in compacts each containing 21 pink tablets and 7 brown tablets. Each pink tablet contains 2.5 mg of norethindrone acetate and 50 mcg of ethinyl estradiol. Each brown tablet contains 75 mg of ferrous fumarate, USP. Available in packages of five compacts and packages of five refills.

Norlestrin 28 1/50 is available in compacts each containing 21 yellow tablets and 7 white inert tablets. Each yellow tablet contains 1 mg of norethindrone acetate and 50 mcg of ethinyl estradiol. Available in packages of five compacts and packages of five refills.

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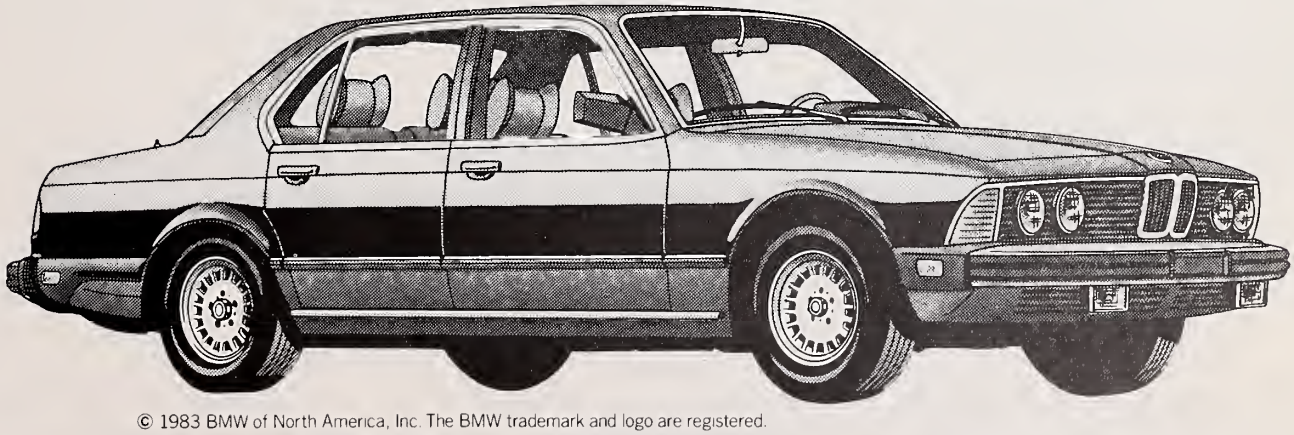
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Auxiliary to the MAG 60th Annual Meeting



"Waving Girl" statue in Savannah. (Photo courtesy of Savannah Area Convention and Visitors Bureau.)

1984-85 Theme: Build Today For A Better Tomorrow

President's Invitation

The Auxiliary to the Medical Association of Georgia cordially invites you to their 60th Annual Convention in Savannah, Georgia. We hope you will join us as we bring this year to a close, review our year's accomplishments, and plan another exciting Auxiliary year. We are proud of the work that each county Auxiliary has done, and we will share this as we meet with good friends from all over the state.

Many activities have been planned for you, both social and business. We look forward to being with you for this grand occasion.

Mrs. Robley D. Smith (Ann)
President, A-MAG

Welcome to Savannah

It is indeed a pleasure to welcome you to the 60th Annual Convention to the Auxiliary of the Medical Association of Georgia.

This year's convention, hosted by the Auxiliary to the Georgia Medical Society (Savannah) will be held on Friday, April 26, and Saturday, April 27, at the Hyatt Regency on River Street.

The Auxiliary to the Georgia Medical Society (Savannah) is here to make your stay in our HISTORIC CITY an enjoyable one. Savannah has many attractions — the river front, the historic homes and buildings, famous eating establishments, and Night In Old Savannah — to name a few.

We all are available to help you have a pleasant visit.

Mrs. James W. Jackson (Sandra)
Convention Co-Chairman
Mrs. E. Daniel DeLoach (Cam)
Convention Co-Chairman

Rules to Govern the Convention

1. The voting body of the convention shall consist of the members of the Executive Board of the Auxiliary to the Medical Association of Georgia and the duly accredited delegates from the county auxiliaries. No one is entitled to vote until registered.
2. To gain recognition, a delegate is requested to rise, address the chair, give her name and the name of her auxiliary.
3. No delegate shall speak more than twice on the same subject and is limited to 2 minutes each time.
4. Badges must be worn by members of the voting body during all general meetings of the convention.
5. Delegates' privileges are not transferable.
6. All motions shall be presented in writing to the Recording Secretary. They shall be signed by persons making the motion.
7. All original motions on resolutions shall be made by submitting two copies, one to the Resolutions Committee and one to the Recording Secretary.
8. All persons appearing on the program must be seated near the platform when the meeting opens.

Auxiliary Program

Thursday, April 25

7:00 MAG General Session — *Ballroom A/B*
(All MAG and Auxiliary members and guests invited)
Presiding: Dr. S. William Clark, Jr., M.D., President
Opening Ceremonies
Report of the President of the Auxiliary to the MAG: Mrs. Robley D. Smith, Tifton

Friday, April 26

8:00 to 5:00 Registration and Information — *Pre-Function, South*
Hospital and Exhibits — *Ballroom C*

10:00 Pre-Convention Executive Board Meeting — *Ballroom D/E/F*
Presiding: Mrs. Robley D. Smith, President
Invocation
Business Meeting

12:00 Auxiliary Luncheon & Fashion Show — *Garden Terrace*
(All delegates, board members, Auxilians, and guests)
Presiding: Mrs. Robley D. Smith, President
Greetings from Auxiliary to Southern Medical Association: Mrs. T. Edward Hill, President
Grace

2:00 Auxiliary General Meeting — *Ballroom D/E/F*
Presiding: Mrs. Robley D. Smith, President
Call to Order
Presidents in Review: County Presidents
Invocation
Pledge of Allegiance and Collect
President's Greetings: Mrs. Robley D. Smith
Welcome: Mrs. James W. Jackson, Savannah, Convention Co-Chairman
Introduction of Head Table: Mrs. Robley D. Smith
Introduction of Past Presidents
Introduction of Special Guests
Greetings from the Medical Association of Georgia: S. William Clark, Jr., M.D., President
Business Meeting
Introduction of Pages: Mrs. E. Daniel DeLoach, Savannah, Convention Co-Chairman
Credentials Report
Convention Standing Rules: Mrs. Emmerich von Haam, Jr., Parliamentarian
Adoption of Program: Mrs. William C. Tippins, Jr., 2nd Vice President
Roll Call: Mrs. Milton I. Johnson, Recording Secretary
Minutes: Mrs. Milton I. Johnson, Recording Secretary
Officers' Reports
Committee Reports
Unfinished Business
New Business
Announcements

3:30 Recess of Meeting

3:35 Open Hearing on Proposed Revisions of Constitution & By-Laws: Mrs. John E. Bates, Chairman, Revisions Committee

6:00 to 7:30 Auxiliary to MAG President's Reception, Savannah Room
(Auxiliary Board Members, MAG Committee on Auxiliary, Special Guests, All Auxilians)

Saturday, April 27

8:00 to 12:00 Registration & Information — *Pre-Function, South*
Hospitality and Exhibits — *Ballroom C*

9:00 Second Auxiliary General Meeting — *Ballroom D/E/F*
Presiding: Mrs. Robley D. Smith, President
Call to Order
Introduction of Guests
Introduction of Past Presidents
Greetings from Auxiliary to the AMA: Mrs. William R. McPhee, President-elect
New Business continued:
Revised Report of Credentials Committee
Revision of Constitution and By-Laws Vote
Election of 1985-86 Nominating Committee
Report of Awards Committee:
Report of the 1984-85 Nominating Committee, Mrs. George R. Jones, Chairman
Election of Officers
Installation of Officers
Presentation of 1985-86 President's Pin and Gavel: Mrs. Robley D. Smith
Inaugural Address and Announcement of 1985-86 Chairmanships: Mrs. Dent W. Purcell, President
Presentation of Past President's Pin: Mrs. George R. Jones, Past President
Announcements

12:00 Adjournment

12:30 Post Convention Board Meeting Luncheon — *Trustee's Banquet Hall*
Past President's Luncheon — *Westbrook Room*

Roche salutes

GEORGIA MEDICINE TODAY



Munchausen's with a new twist

How do you simulate "asystolic intervals" during Holter monitoring? All it takes is a twist of the wrist, found Drs. C. Craig Mitchell and Martin J. Frank of the Medical College of Georgia.[1] A 24-year-old woman was referred to the cardiology service with ventricular premature beats, atypical chest pain and recurrent syncope. Medication appeared to control the arrhythmia, but repeated periods of monitoring showed frequent episodes of "asystole" with frequent bizarre "escape" beats.

After insertion of a permanent pacemaker, the "asystolic" episodes initially ceased but later recurred. Erratic patient behavior and close examination of the Holter strips suggested that the bradycardia was probably artifactual. While pseudobradycardia can be caused by component malfunction, the evidence pointed to patient tampering. A quick 20-degree rotation of the recording tape reel was found to produce similar ECG patterns.

This was probably the first reported case of apparent patient-induced pseudobradycardia during Holter monitoring, and it resulted in unnecessary insertion of a permanent pacemaker. Seal the record case, suggest Drs. Mitchell and Frank, if you're trying to prevent "electronic Munchausen's syndrome."

Cervical smoke screen

Cigarette smoking is significantly associated with dysplasia and carcinoma *in situ* of the uterine cervix, according to a case-control study headed by Dr. Edwin Trevathan[2] at Emory University. Among women who smoked, the relative risk of cervical cancer rose to 3.6. Even more alarmingly, the relative risk to women with 12 or more pack-years of exposure rose to 12.7. Further, there was evidence that women who began smoking as early teenagers faced even greater risk. It was hypothesized that the cervical mucosa might be exposed to carcinogens in cigarette smoke that are absorbed into the blood and then secreted by the epithelium.

A *JAMA* editorial comments: "As the Surgeon General's report notes, cigarette smoking is the single largest cause of disease and premature death in this country. We can now add cervical cancer to the list of tobacco-caused diseases."[3]

About "herbal" prednisone and indomethacin

Dr. Gary E. Myerson of Atlanta reports a herbal medication called *chuifong toukuwan,* ordered by mail from Hong Kong, that was used by rheumatoid arthritis patients and caused conditions ranging from acute flares, lesions and Cushingoid appearance to arrhythmias and depression.[4] Three samples analyzed at Georgia Tech were found to contain prednisone and indomethacin, and one included a high concentration of lead. As they say in Georgia, *caveat emptor.*

References: 1. Mitchell CC, Frank MJ: *JAMA 248*:469-470, Jul 23/30, 1982. **2.** Trevathan E, *et al*: *JAMA 250*:499-502, Jul 22/29, 1983. **3.** Austin DF: *JAMA 250*:516-517, Jul 22/29, 1983. **4.** Medical News. *JAMA 248*:623, Aug 13, 1982.

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*Feighner JP, *et al: Psychopharmacology 61*:217-225, Mar 22, 1979

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Warnings: Use with great care in patients with history of urinary retention or angle-closure glaucoma. Severe constipation may occur in patients taking tricyclic antidepressants and anticholinergic-type drugs. Closely supervise cardiovascular patients. (Arrhythmias, sinus tachycardia and prolongation of conduction time reported with use of tricyclic antidepressants, especially high doses. Myocardial infarction and stroke reported with use of this class of drugs.) Caution patients about possible combined effects with alcohol and other CNS depressants and against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving).

Usage in Pregnancy: **Use of minor tranquilizers during the first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

Since physical and psychological dependence to chlordiazepoxide have been reported rarely, use caution in administering Limbitrol to addiction-prone individuals or those who might increase dosage; withdrawal symptoms following discontinuation of either component alone have been reported (nausea, headache and malaise for amitriptyline; symptoms [including convulsions] similar to those of barbiturate withdrawal for chlordiazepoxide).

Precautions: Use with caution in patients with a history of seizures, in hyperthyroid patients or those on thyroid medication, and in patients with impaired renal or hepatic function. Because of the possibility of suicide in depressed patients, do not permit easy access to large quantities in these patients. Periodic liver function tests and blood counts are recommended during prolonged treatment. Amitriptyline component may block action of guanethidine or similar antihypertensives. Concomitant use with other psychotropic drugs has not been evaluated; sedative effects may be additive. Discontinue several days before surgery. Limit concomitant administration of ECT to essential treatment. See Warnings for precautions about pregnancy. Limbitrol should not be taken during the nursing period. Not recommended in children under 12. In the elderly and debilitated, limit to smallest effective dosage to preclude ataxia, oversedation, confusion or anticholinergic effects.

Adverse Reactions: Most frequently reported are those associated with either component alone: drowsiness, dry mouth, constipation, blurred vision, dizziness and bloating. Less frequently occurring reactions include vivid dreams, impotence, tremor, confusion and nasal congestion. Many depressive symptoms including anorexia, fatigue, weakness, restlessness and lethargy have been reported as side effects of both Limbitrol and amitriptyline. Granulocytopenia, jaundice and hepatic dysfunction have been observed rarely.

The following list includes adverse reactions not reported with Limbitrol but requiring consideration because they have been reported with one or both components or closely related drugs:

Cardiovascular: Hypotension, hypertension, tachycardia, palpitations, myocardial infarction, arrhythmias, heart block, stroke.

Psychiatric: Euphoria, apprehension, poor concentration, delusions, hallucinations, hypomania and increased or decreased libido.

Neurologic: Incoordination, ataxia, numbness, tingling and paresthesias of the extremities, extrapyramidal symptoms, syncope, changes in EEG patterns.

Anticholinergic: Disturbance of accommodation, paralytic ileus, urinary retention, dilatation of urinary tract.

Allergic: Skin rash, urticaria, photosensitization, edema of face and tongue, pruritus.

Hematologic: Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia.

Gastrointestinal: Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, black tongue.

Endocrine: Testicular swelling and gynecomastia in the male, breast enlargement, galactorrhea and minor menstrual irregularities in the female, elevation and lowering of blood sugar levels, and syndrome of inappropriate ADH (antidiuretic hormone) secretion.

Other: Headache, weight gain or loss, increased perspiration, urinary frequency, mydriasis, jaundice, alopecia, parotid swelling.

Overdosage: Immediately hospitalize patient suspected of having taken an overdose. Treatment is symptomatic and supportive. I.V. administration of 1 to 3 mg physostigmine salicylate has been reported to reverse the symptoms of amitriptyline poisoning. See complete product information for manifestation and treatment.

Dosage: Individualize according to symptom severity and patient response. Reduce to smallest effective dosage when satisfactory response is obtained. Larger portion of daily dose may be taken at bedtime. Single *h.s.* dose may suffice for some patients. Lower dosages are recommended for the elderly.

Limbitrol DS (double strength) Tablets, initial dosage of three or four tablets daily in divided doses, increased up to six tablets or decreased to two tablets daily as required. Limbitrol Tablets, initial dosage of three or four tablets daily in divided doses, for patients who do not tolerate higher doses.

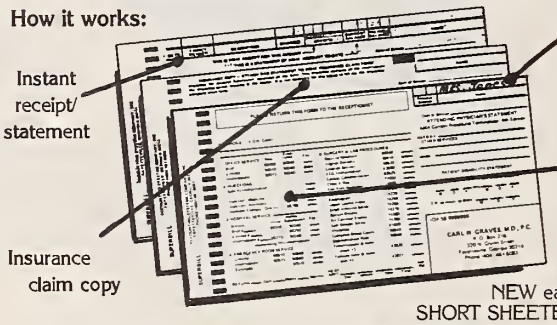
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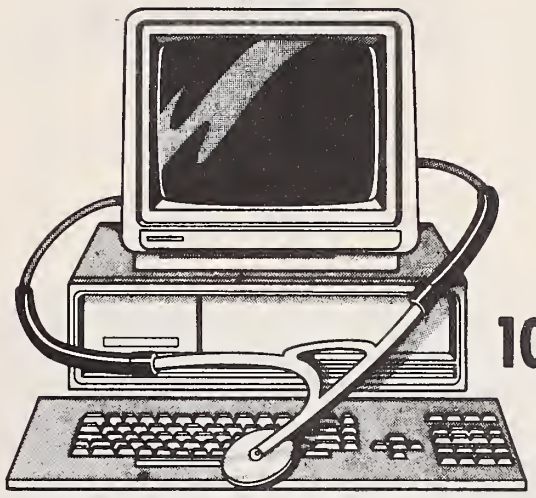
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An Attack on Physician Services

by Albert A. Carr, M.D.

At its Special Session in October, 1984, the MAG House of Delegates voted to develop a business plan for medical practice and present it at the next scheduled Annual Session meeting. This paper reviews the expenditures of the private and public sector on medical-health care and discusses various practice options available to Georgia physicians.

A Special Session of the House of Delegates of the Medical Association of Georgia (MAG) convened at the Hyatt Regency in Atlanta on October 13, 1984. It was called to allow the House to consider a role for MAG with regard to the various alternative medical-health care plans which have been appearing at an alarming rate in the nation and are now in Georgia. These plans or systems are: (1) various models of Health Maintenance Organizations (HMOs); (2) Independent Practice Associations (IPAs); and (3) Preferred Provider Organizations (PPOs). These are important in terms of: (1) how physicians are paid; (2) the physician-patient relationship; (3) the effectiveness of medical care in terms of diagnosis, prevention, and treatment outcome related to cost; (4) and the role of the physician with regard to control over the broad sphere of medical-health care. Who will be responsible for the rationing of medical care[1, 2] and the decisions as to who will live and die?[3] The physician, patient, government, business corporations, or managers of the various medical-health care practice plans? The House of Delegates voted to develop a business plan for medical practice and present it at the next scheduled Annual Session meeting.

The public at large, government officials, and management of corporate businesses are concerned about the ever-increasing spiral of medical-health care expenditures and believe the cost can and should be less. These groups perceive physicians as gate keepers who are supposed to use our medical-health care system in a cost effective manner. Whether or not correct, the perception is that physicians have not contained the cost of medical care, and in fact, are a major cause of the rapid rise due to inefficient and over utilization of physician and hospital services and tests. The "specialty type of practices" promoted by our medical school educational systems and the majority of organized medical societies are more expensive and fragmented approaches to medical care when compared to a primary care type of practice. This emphasis on primary care is one central concept of an HMO and is one main approach to cost containment.

Methods

For this review, federal and other publications were reviewed. Factors based on personal, federal, state, and local government expenditures for personal medical-health are used to convert costs from actual to constant 1983 dollars.[4] The medical-health care expenditures for Medicare are significant and growing. The influence of Medicare on medical practice today is important. Medicare Part A helps pay for inpatient hospital services and home health care. Part B

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supplementary medical insurance helps pay for physician services, outpatient hospital services, physical therapy, diagnostic x-ray services, laboratory services, and durable medical equipment. About 68% of Medicare enrollees become beneficiaries. Physician services are 77-78% of expenditures for all Part B services and 74-75% of all expenditures. In FY 83, $18.3 billion were spent for Medicare Part B; $13.6 billion were for physicians' services. Administrative cost FY 83 was 4.5%, or $829 million dollars.[21] In FY 83, for 53% of physician charges, assignment was accepted.

Cost of Medical-Health Care

Our national medical-health care expenditures since 1965 are shown in Table 1. For the period 1970-1984, the actual dollar increase was 426%; per capita spending increased from $358 to $1632 (356%). When increments are considered in constant 1983 dollars,[4] the per capita increment was 87% for an average annual increase of 5.8%; total medical-health expenditures increased by 115.5%, for an average annual increase of 7.7%. If the rise in total medical-health care and per capita spending for it is considered in relation to the GNP in 1983 dollars, these two factors increased at a rate 2.7 and 2.0 times faster than the GNP. The average annual percent of the GNP spent for medical-health care 1970-84 of 9% and 10.5-10.7% for the last 3 years is cause for concern for those who pay for it, mostly third parties.

Table 2 shows the relationship of expenditures between public, private, and direct payments. Since 1950, there has been a dramatic rise in third party payment. Corporate businesses are concerned about this large amount of private spending (Table 3) because they pay for a significant portion of it through medical-health care insurance premiums.

Table 4 shows the expenditures of the federal budget in relation to human resources (services), Medicare, and national defense. From 1970-1983, based on 1983 dollars,[4] the average annual increase in national defense expenditures was 0.8%, compared to 10.9% for human services and 13% for Medicare. This marked increase of Medicare expenditures is cause for an attempt at containment.

The relationship of physicians' services to hospital care or services is shown in Table 5. Since 1965, the percent of the total national medical-health care expenditures for physicians' services has remained relative-

TABLE 1 — National Medical-Health Expenditures[5] Related to Gross National Product (GNP), 1965-1984

	Total Amount Medical Health (billions)	*Per Capita*	*Annual % Increase Medical-Health*	*Total Amount Medical-Health % of GNP*	*Gross National Product (billions)*	*Annual % Increase GNP*
1965	$ 41.7	$ 211	NA	6.0	$ 691.0	NA
1970	74.7	358	NA	7.5	992.7	NA
71	83.3	394	11.5	7.7	1,077.7	8.6
72	93.5	438	12.3	7.9	1,185.9	10.0
73	103.2	478	10.3	7.8	1,326.4	11.8
74	116.4	535	12.8	8.1	1,434.2	8.2
75	132.7	604	14.0	8.6	1,549.2	8.0
76	149.7	674	12.8	8.7	1,718.0	10.8
77	169.2	755	13.1	8.8	1,918.3	11.7
78	189.3	836	11.9	8.8	2,163.8	12.8
79	215.0	938	13.6	8.9	2,417.8	11.7
1980	249.0	1075	15.8	9.5	2,631.7	8.8
81	286.6	1225	15.1	9.8	2,954.1	12.3
82	322.4	1365	12.5	10.5	3,073.0	4.0
83	357.6	1499	10.9	10.7	3,338.1	8.6
84*	392.7	1632	9.8	10.9	3,603.2	7.9
			In 1983 Dollars[5]			
1965	$115.5	$ 584	NA	6.0	$1,914.1	NA
1970	174.5	836	NA	7.5	2,319.4	NA
71	186.4	881	6.8	7.7	2,410.9	3.9
72	201.5	945	8.1	7.9	2,555.8	6.0
73	213.2	988	5.8	7.8	2,740.5	7.2
74	222.6	1023	4.4	8.1	2,742.3	0.1
75	231.6	1054	4.0	8.6	2,703.6	1.4
76	246.2	1109	6.3	8.7	2,825.7	4.5
77	260.3	1162	5.7	8.8	2,951.2	4.4
78	273.9	1210	5.2	8.8	3,131.4	6.1
79	286.3	1249	4.5	8.9	3,219.4	2.8
1980	301.5	1302	5.3	9.5	3,186.1	1.0
81	318.1	1359	5.5	9.8	3,278.7	.3
82	336.2	1423	5.7	10.5	3,204.4	2.3
83	357.6	1499	6.4	10.7	3,338.1	4.2
84*	376.1	1563	5.2	10.9	3,451.3	3.4

* Projected.

TABLE 2 — Third Party and Direct Patient Payment for Physicians' Services,[6] In Percent

	1950 %	*1960 %*	*1970 %*	*1980 %*	*1982 %*
Third party	16.8	34.6	54.9	62.0	62.7
Public	11.7	28.2	34.0	35.3	35.2
Private	5.2	6.4	20.9	26.7	27.6
Direct	83.2	65.4	45.1	38.0	37.3

ly stable, even with increasing numbers of physicians. In contrast, the proportion of expenditures used for hospital care has risen steadily from 33 to 42%. For the period 1970-1984 (1983 dollars[4]), physician services rose at an average annual rate of 6.0%, while the rise for hospital expenditures was 6.6%. Although the rise in physicians' services was less than for hospital services, the rise of each is 2.7 and 3.3 times that of the GNP, respectively. The perception is that physicians control the expenditures of both, and 19% of $357.6 to $392.7 billion total medical-health care expenditures is no small amount.

Another way of assessing rate of change is to relate cost trends for a fixed "market basket" of goods and services bought in 1967 at $100 in each category of goods or services. This puts all goods and services on a relative basis to what each was in 1967 and accounts for inflation. For a physician service, this relates to the increase in charges for $100 of services in 1967 (unit rather than total service). The annual percent changes of these Consumer Price Index (CPI) items are shown in Table 6. The average annual increase in CPI physician service for period 1970-1984 was 8.4%, as compared to 7.2% for all items minus medical care. Hospital room rates increased at a much higher rate, 11.7%. The perception is that physicians control both services.

Table 7 shows the annual expendi-

TABLE 3 — National Medical-Health Expenditures[5] (dollars in billions) 1965-1984

	Private Expenditures	*Public Expenditures*		
	(billions)	*Total*	*Federal (billions)*	*State/local*
1965	$ 30.9	$ 10.8	$ 5.5	$ 5.2
1970	46.9	27.8	17.7	10.1
71	51.6	31.7	20.3	11.3
72	58.1	35.4	22.9	12.5
73	63.9	39.3	25.2	14.1
74	69.3	47.1	30.4	16.6
75	76.5	56.2	37.1	19.1
76	86.7	62.9	42.6	20.3
77	99.1	70.1	47.4	22.7
78	109.8	79.5	53.9	25.7
79	124.4	90.6	61.0	29.5
1980	143.6	105.4	71.1	34.3
81	164.1	122.2	83.7	38.5
82	185.6	136.8	93.2	43.7
83	199.4	151.4	104.4	47.1
84*	213.2	166.0	115.5	50.4

* Projected.

TABLE 4 — Federal Budget (FB),[4, 5, 7] Actual Dollars

	*Human Resources**		*Medicare*		*National Defense*		*Total Federal*
	% FB	*(billions)*	*% FB*	*(billions)*	*% FB*	*(billions)*	*FB (billions)*
1965	31.1	$ 36.8	NA	NA	42.7	$ 50.6	$118.4
1970	38.5	75.4	3.7	7.1	41.8	81.8	195.8
1983	53.5	425.8	7.2	56.9	26.4	210.1	795.9
				1983 Dollars			
1965	31.1	101.977	NA	NA	42.7	140.013	327.9
1970	38.5	176.138	3.7	16.926	41.8	191.235	457.5
1983	53.5	425.806	7.2	56.868	26.4	210.118	795.9

Percent increase in 1983 dollars	1965-1983	1970-1983
Human Resources	317.5%	141.7%
Medicare	NA	236.0%
National Defense	50%	9.9%

* Human resources (Services) includes social welfare programs of: education, training, employment, and social services (ETESS), health, social security and Medicare, income security, and veterans benefits and services.

TABLE 5 — National Medical-Health Expenditures[5] (dollars in billions), 1965-1984

	Hospital Care					*Physicians' Services*				
	Actual Dollars			*1983 Dollars*		*Actual Dollars*			*1983 Dollars*	
	% Total	*Amount (billions)*	*% Increase*	*Amount (billions)*	*% Increase*	*% Total*	*Amount (billions)*	*% Increase*	*Amount (billions)*	*% Increase*
1965	33.3	$ 13.9	NA	$ 38.5	NA	20.3	$ 8.5	NA	$23.6	NA
1970	37.2	27.8	NA	64.9	NA	19.1	14.3	NA	33.4	NA
71	37.0	30.8	10.8	68.9	6.2	19.1	15.9	11.1	35.6	6.6
72	37.3	34.9	13.8	75.2	9.7	18.4	17.2	8.2	37.1	5.9
73	37.5	38.7	10.9	80.0	6.4	18.5	19.1	11.0	39.5	6.5
74	38.5	44.8	15.8	85.7	7.1	18.2	21.2	11.0	40.5	2.5
75	39.3	52.1	16.3	90.9	6.1	18.8	24.9	17.5	43.5	7.4
76	40.0	59.9	15.0	98.5	8.4	20.8	27.6	10.8	45.4	4.4
77	40.0	67.8	13.2	104.3	5.6	18.9	31.9	15.6	49.1	8.1
78	40.0	75.7	11.7	109.6	5.1	18.9	35.8	12.2	51.8	5.5
79	40.2	86.1	13.7	114.6	4.6	18.7	40.2	12.4	53.5	3.3
80	40.3	100.4	16.6	121.5	6.0	18.8	46.8	16.4	56.7	6.0
81	41.2	118.0	17.5	130.9	7.7	19.1	54.8	16.9	60.8	9.2
82	42.0	135.5	14.8	141.3	7.9	19.2	61.8	12.8	64.4	5.9
83	42.1	150.6	11.1	150.6	6.6	19.3	69.0	11.6	69.0	7.1
84*	42.2	165.7	10.0	158.7	5.4	19.4	76.1	10.2	72.9	5.7

* Projected.
In 1983 dollars, 1970-1984, the average annual increase of hospital care 6.6% and physicians' services 6.0%.

TABLE 6 — Consumer Price Index, (CPI) Annual Percent Change of Selected Items of CPI, 1965-1984

	All Items %	*All Items Minus Medical Care* %	*Physician Services* %	*Hospital Room* %
1965	1.7	1.5	3.6	5.6
66	2.9	3.0	5.8	10.0
67	2.9	2.4	7.1	19.8
68	4.2	4.1	5.6	13.6
69	5.4	5.4	6.9	13.4
1970	5.9	5.8	7.5	12.9
71	4.3	4.1	6.9	12.2
72	3.3	3.3	3.1	6.6
73	6.2	6.4	3.3	4.7
74	11.0	11.1	9.2	10.7
75	9.1	8.9	12.3	17.2
76	5.8	5.5	11.4	13.8
77	6.5	6.2	9.3	11.5
78	7.7	7.6	8.3	11.0
79	11.3	11.4	9.2	11.4
1980	13.5	13.6	10.6	13.1
81	10.4	10.3	11.0	14.8
82	6.1	5.9	9.4	15.7
83	3.2	2.9	7.7	11.3
84*	4.5	4.4	7.4	9.0

Source: U.S. Department of Labor, Bureau of Labor Statistics
* Projected.

ture (1983 dollars) for physicians' services, 1976-1984, the annual percent increase, the annual percent change in CPI for overall national expenditures, and economic index (EI) for Medicare. The EI is that over a base value of 1.0 for maximum allowable services in a current year over that charge for the same service in fiscal year 1973. The rates are calculated based on the weighted averages of: (1) changes in general earning levels and (2) changes in expenses of the kind incurred by physicians in office practice. This is for Medicare payments of physicians' service. This was to contain the rapid rise in unit services by physicians for Medicare beneficiaries. The average annual increase in 1983 dollars was 6.4% for the overall national services and 12.5% for Medicare. The annual rise in expenditures for physician services was two times more rapid for Medicare. The average annual increases in

TABLE 7 — Annual Expenditures,[4, 5, 7, 8] Physicians' Services, 1976-1984

	National					*Medicare*				
	Actual Dollars (billions)	*Annual Increase %*	*1983 Dollars (billions)*	*Annual Increase %*	*CPI** Annual Inc. %*	*Actual Dollars (billions)*	*Annual Increase %*	*1983 Dollars (billions)*	*Annual Increase %*	*EI† Annual Inc. %*
1976	$27.6	NA	$45.4	NA	11.3	$ 3.48	NA	$ 5.72	NA	$17.9
77	31.9	15.6	49.1	8.1	9.3	4.28	22.9	6.58	15.0	8.2
78	35.8	12.2	51.8	5.5	8.3	5.03	17.5	7.28	10.6	6.4
79	40.2	12.3	53.5	3.3	9.2	5.84	16.1	7.78	6.9	5.0
1980	46.8	16.4	56.7	6.0	10.6	7.21	23.5	8.73	12.2	7.5
81	54.8	17.1	60.8	9.2	11.0	8.78	21.8	9.74	11.6	8.5
82	61.8	12.8	64.4	5.9	9.4	10.72	22.1	11.18	14.8	8.0
83	69.0	11.7	69.0	7.1	7.7	13.6	26.9	13.6	21.6	8.8
84*	76.1	10.3	72.9	5.7	7.4	15.3	12.5	14.66	12.9	5.9

* Projected.
** CPI = Consumer Price Index.
† EI = Economic Index.

TABLE 8 — Annual Expenditures,[4, 5] Physician Services per Active Physician,[9] 1977-1984, Annual % Increase

	National Total		*National Total Less Medicare*		*Medicare*	
	Actual %	*1983 Dollars* %	*Actual* %	*1983 Dollars* %	*Actual* %	*1983 Dollars* %
1977	11.6	3.9	10.5	3.4	18.9	11.2
78	8.4	2.5	7.7	1.3	13.5	6.8
79	8.6	0	8.1	−.1	12.5	3.5
1980	12.7	2.5	11.6	1.5	19.5	8.6
81	13.4	4.0	12.4	3.2	18.0	8.2
82	9.3	2.7	7.5	1.0	18.3	11.2
83	8.2	3.7	6.2	1.9	17.5	12.7
84*	7.3	2.7	5.5	1.1	14.5	9.8

* Projected.

CPI and EI were comparable at 9.3% and 8.5%.

Our Medicare population has grown faster than other age groups and may account in part for the relative overall increased expenditures for that group. It does not explain increased unit charges. Medicare beneficiaries may visit physicians more frequently for more expensive visits and more tests. Physicians' services are looked at in terms of expenditures per physician per year in order to compare Medicare to the national experience.

In Table 8, annual increases in actual and constant 1983 dollars are

listed. The average annual increase (1983 dollars) for national total less Medicare physician services per physician was 1.7%, as compared to 9.0% for Medicare. The rise per physician expenditures for physician services has increased 5.3 times as rapidly for Medicare as compared to national, less Medicare services, with an average annual increase in the number of active physicians of 3.7%. Therefore, economic indexing initiated in 1973 did not contain the cost for Medicare. It occurred with a 29%

Physician services are 77-78% of expenditures for all Medicare Part B services and 74-75% of all expenditures.

increase in the number of active physicians of 115,520 in the period 1976-1984. These physicians are the result of our expanded medical school-post graduate training programs and foreign medical graduate immigration to this country. There is one physician for every 500 persons in the United States.

Physician and hospital services are rising at a much faster rate for Medicare beneficiaries as compared to these same services for the rest of the nation. This is a major concern at the federal level. Table 9 demonstrates the growth of active physicians in the United States and the annual expenditures for physician services per physician.

In Table 10, median net earnings (earnings less tax deductible professional expenses but before income taxes for unincorporated physician and total compensation from salary, bonuses, and retirement set aside for incorporated physicians) are noted by specialties. Comparison of net income and expenses based on constant 1983 dollars for years 1975, 1981, 1982, and 1983 are noted in Table 11. Internists, family or general physicians, and pediatricians have lost real

TABLE 9 — Annual Expenditures, Physician Services[5] per Active Physician,[9] 1976-1984

	Number	*National*		*National-Medicare*		*Medicare*	
	of Active Physicians	*Actual Dollars*	*1983 Dollars*	*Actual Dollars*	*1983 Dollars*	*Actual Dollars*	*1983 Dollars*
1976	392,780	$ 69,257	$115,572	$ 61,426	$101,030	$ 8,842	$14,543
77	406,960	78,386	120,054	67,874	104,423	10,512	16,172
78	421,140	85,007	123,020	73,078	105,753	11,932	17,268
79	435,320	92,345	122,963	78,927	105,096	13,418	17,867
1980	449,500	104,115	126,047	88,084	106,639	16,031	19,408
81	464,000	118,103	131,080	99,181	110,079	18,922	21,001
82	478,900	129,045	134,562	106,659	111,219	22,386	23,343
83*	499,360	139,586	139,586	113,282	113,282	26,304	26,304
84*	508,300	149,711	143,401	119,568	114,529	30,143	28,873

* Projected.

TABLE 10 — Net Earnings of Physicians According to Specialty, 1981[10]

	Median Net Earnings Per Year 1981	
	Actual Dollars	*1983 Dollars*
Neurosurgeons	135,000	149,834
Orthopedic Surgeons	134,670	149,467
Radiologists	127,310	141,299
Plastic Surgeons	119,210	132,308
Thoracic Surgeons	116,670	129,489
Anesthesiologists	108,950	120,921
OB/Gyn	105,140	117,592
Pathologists	104,620	116,115
Ophthalmologists	96,740	107,369
General Surgeons	95,560	106,059
Neurologists	90,000	99,889
Internists	79,710	88,468
Psychiatrists	70,350	78,079
Family Medicine	66,855	74,200
Pediatricians	65,380	72,564
All Surgical Specialties	111,860	124,150
All Nonsurgical Specialties	83,800	93,007
All Fields	86,210	95,683

income since 1975. These specialties conduct the major portion of primary medical care. Rising office expenses may account in part for the decreased net income. Net income has increased with less percent rise in office expenses for hospital-based physicians (anesthesiologists and radiologists), surgeons, and obstetricians-gynecologists. In 1980, one in 10 physicians netted at least $150,000 (181,600 in 1983 dollars) versus one in 12 in 1979.[10]

There are some discrepancies in reported gross incomes per physician. Based on the 1981, 1982, and 1983 national expenditures for physician services per physician[4, 5, 9] (Table 9 in 1983 dollars) the incomes reported in the AMA survey are 43.3, 37.8, and 37.7% higher.[11-13] The physicians responding to the AMA survey (60%) may have higher incomes than the nonresponders. In addition, the government data[4, 5, 9] may underestimate direct payments from patients.

In FY 83, $18.3 billion were spent for Part B; $13.6 billion were for physicians' services.

Trends are the same and indicate an overall increase in physician income except for those involved in primary care. Growth in expenses may reflect physicians putting increased amounts

TABLE 11 — SMS Physician-Net Income and Expenses 1983 Dollars[11, 12, 13]

	1975 Dollars	1981 Dollars	% Change 1975-81	1982 Dollars	% Change 1981-82	1983 Dollars	% Change 1982-83
				Net Income			
All Physicians	$103,867	$105,681	+ 1.7	$103,753	− 1.8	$106,300	+2.5
Specialty							
Surgery	119,023	131,632	+10.6	136,029	+ 3.3	138,900	+2.1
Anesthesiology	99,651	131,632	+32.0	137,017	+ 4.1	NA	NA
Radiology	131,239	129,745	− 1.1	142,649	+ 9.9	NA	NA
Obstet/Gyn	110,471	122,975	+11.3	120,751	− 1.8	NA	NA
Internal Medicine	99,476	94,451	− 5.3	90,510	− 4.2	85,600	−5.4
General/Fam. Med.	79,232	80,133	+ 1.1	74,974	− 6.4	68,500	−8.6
Psychiatry	78,185	78,357	+ .2	79,771	+ 1.8	NA	NA
Pediatrics	77,312	72,253	− 6.5	73,305	+ 1.5	NA	NA
				Office Expenses			
All Physicians	$ 62,500	$ 82,130	+25.9	$ 81,752	− .5	$ 85,900	+5.1
Specialty							
Surgery	83,072	102,219	+23.0	109,489	+ 7.1	111,900	+2.2
Anesthesiology	36,475	53,718	+47.3	54,536	+ 1.5	NA	NA
Radiology	86,736	104,431	+20.4	71,011	−32.0	NA	NA
Obstet/Gyn	88,482	110,543	+24.9	113,660	+ 2.8	NA	NA
Internal Medicine	66,143	84,350	+27.5	79,041	− 6.0	81,300	+2.9
General/Fam. Med.	65,619	80,688	+22.9	78,936	NA	80,500	+2.0
Psychiatry	33,857	31,410	− 7.3	38,790	− 2.2	NA	NA
Pediatrics	60,907	70,921	+16.4	69,552	− 1.9	NA	NA

of their income into deferred compensation programs, offices, or real estate. However, this cannot explain the decline in net income of primary care physicians unless their behavior related to professional expenses is different. Increased utilization of non-physician personnel has increased office expenses and increased overall physicians' service expenditures.[14] Physicians who use more allied health professionals experience more patient visits and more net income with no increase in working time.[15]

Medicare beneficiaries pay for a significant percent of some specialists' income: 35% for thoracic surgery, 29% for internists, 25% for general surgeons, and 24% for both ophthalmologists and neurologists. Overall, Medicare outlays account for 19% of all physicians' services and 19% of individual physician income. Per capita expenditures for physicians' services are nearly three times greater for those 65 and older compared to nonaged.[14]

Volume of laboratory tests has increased at the request of physicians, and surgical operations have increased from 15.2 million in 1972 to 19.7 million in 1982, an average annual increase of 2.6%.[14] The average annual growth rate for physician visits was 0.3% for the same time period.[14] Survey data from 1982 to 1983 indicate a decrease in the number of patient visits to physicians and hours of patient care activity.[16] Yet, net income increased for surgeons and decreased for internists and family physicians (Table 11).

The [public] perception is that physicians control the expenditures of both [their own and hospital services], and 19% of $357.6 to $392.7 billion total medical-health care expenditures is no small amount.

A greater percent of physicians with increasing net income (surgeons, radiologists, and OB-Gyn physicians) as compared with those with decreasing net income (internists and family physicians) adopt new procedures.[17] New procedures are more costly. Expenditures for cognitive physicians' services are much less than those for procedures, especially new ones.

The number of AMA-sponsored CPT codes has increased from 2000-2500 in 1966 to more than 6000 today. Although this should allow for more flexibility and specificity, it is a source of increased administrative work and code creep. Code creep is defined as a higher charge for the same service on the basis of a higher CPT code. This results in increased income, but CPT unit prices remain stable. There also is evidence for unbundling of services. This is defined as taking one service and dividing it into smaller components and billing for each smaller component with the overall charge significantly greater than the original.[14]

In a recent study, community-based cardiologists had broader indications for coronary artery bypass surgery and recommended it more often, compared with HMO and university medical school cardiologists.[18] There should not be wide differences in the use of this service since scientific data support less rather than more use.[19] British general practitioners order significantly less tests than American internists

when caring for hypertensives.[20] Again, this is evidence that physicians in this country are more laboratory or test oriented, all of which is expensive.

There is no question that physicians order or prescribe for the majority of medical health care expenditures. Physicians' services and costs are more directly controlled by physicians. Hospital/surgical and test services are prescribed by physicians, but the majority of the cost is determined by others. Hospital services, especially for Medicare beneficiaries, result in remarkable expenditures (Table 12). Physicians and their patients decide which type and intensity of services are needed; yet someone else (the federal government and business corporations) is paying for it. This may increase willingness to seek services with decreased concern about costs. Other factors may be: (1) in the case of Medicare, increased growth of enrollee numbers; (2) inflation; (3) intensity of care; (4) increased volume of care; (5) more costly technology; (6) inefficiency; (7) increased use of non-physicians personnel (allied health professionals); or (8) lack of cost control incentives. There is very little data on effectiveness of medical care in terms of prevention, diagnosis, treatment outcome, or relief of suffering related to cost (cost effectiveness). Quality of care must be defined. Cost effectiveness, abilities in diagnosis and treatment, training, standards or habits of practice, and patient concern are all involved.

Consequences

As a result of the documented rising medical-health care expenditures, the federal government and management of business corporations have employed measures to contain utilization and costs of both hospital and physicians' services. In 1972, provided by Section 222 of Social Security Amendments of 1972 resulting in *Public Law* 92-603, the Department of Health and Human Services (HHS) funded experiments and projects to test the feasibility of prospective payment plans. Section 223 of 1972 amendments mandated prospective limits on Medicare reimbursements to hospitals starting in 1974.

Code creep is defined as a higher charge for the same service on the basis of a higher CPT code. This results in increased income, but CPT unit prices remain stable.

The Tax Equity and Fiscal Responsibility Act (TEFRA) of 1982, *Public Law* 97-248, established a target rate on allowable annual rate increases in operating costs per beneficiary for inpatient hospital services. A provision of TEFRA was to develop a prospective payment plan which was signed into law April 20, 1983, Title VI of *Public Law* 98-21, the Social Security Amendments of 1983. It has become known as the Prospective Payment System (PPS), with regulations issued in the Federal Register (FR) September 1, 1983, FR 39751, and January 3, 1984, FR 234. Modifications to PPS were included in *Public Law* 98-369 in the Deficit Reduction Act of 1984 (July 18, 1984), and on August 31, 1984, final rules regarding PPS payment rates in FY 85 were issued in FR 34727.

This has evolved into what we now know as Diagnosis Related Groups or DRGs. This system is to be monitored by peer review organizations (PROs) under contract with the Health Care Financing Administration (HCFA) of HHS. As a result, hospitals are already documenting reduced admissions and length of stay. In the June issue of *Trends*, the American Hospital Association noted length of stay down 4.5% to 6.8 days and for Medicare beneficiaries down 6.9% to 9.2 days. Admissions fell 4% overall and 1.5% for patients over 65.

HCFA has been considering new methods of payment for physicians' services since *Public Law* 98-21 mandated the Secretary of HHS to begin collection of data in FY84 for computing physician charges by DRGs for services furnished to hospital inpatients. In the meantime, of the Medicare Part B, physician fee freeze, *Public Law* 98-369 was implemented on Oct. 1, 1984. This is voluntary for physician participation. This was done even though physicians in the AMA and MAG have voluntarily not increased their fees this year. The prospects are real for a mandatory

TABLE 12 — Annual Expenditures[5] of Hospital Services, 1976-1984

	National				*National-Medicare*				*Medicare-Part A*			
	Actual Dollars Billions	*Annual Increase %*	*1983 Dollars Billions*	*Annual Increase %*	*Actual Dollars Billions*	*Annual Increase %*	*1983 Dollars Billions*	*Annual Increase %*	*Actual Dollars Billions*	*Annual Increase %*	*1983 Dollars Billions*	*Annual Increase %*
1976	59.9	NA	98.5	NA	47.1	NA	77.4	NA	12.8	NA	21.1	NA
77	67.8	13.2	104.3	5.9	52.6	11.6	80.9	4.5	15.2	18.8	23.4	10.9
78	75.7	11.7	109.6	5.1	57.8	9.9	83.7	3.5	17.9	17.8	25.9	10.7
79	86.1	13.7	114.6	4.6	65.8	13.8	87.6	4.7	20.3	13.4	27.0	4.3
1980	100.8	16.6	121.5	6.0	76.5	16.3	92.1	5.1	24.3	19.7	29.4	8.9
81	118.0	17.5	130.9	7.7	88.7	15.9	98.4	6.8	29.3	20.6	32.5	10.5
82	135.5	14.8	141.3	7.9	100.6	13.7	104.9	6.6	34.9	19.1	36.4	12.0
83	150.6	11.1	150.6	6.6	112.0	11.3	112.0	11.3	38.6	10.6	38.6	6.0
84*	165.7	10.0	158.7	5.4	120.6	7.6	115.7	3.3	45.1	16.8	43.0	11.4

* Projected.
Average annual increase in 1983 dollars national-less, Medicare 5.7%, Medicare-Part A 9.3%. The rise is Medicare Part A is 1.6 times faster than that for national-Medicare hospital services.

prospective payment system for physicians' services (PPSP) or revised relative value scale or fee schedules initially for Medicare Part B. When this happens, it is likely that private third parties will institute the same. HCFA officials met with representatives of AMA, state medical and specialty societies, October 15, 1984, to discuss methods of payment for physicians' services.

The public sector via managers of business corporations and employees are also concerned about the high cost of medical-health care. Corporations are curbing costs by: (1) cost sharing with the employee; (2) larger deductibles on the insurance; (3) "wellness" programs; and (4) encouraging employees to join HMOs.[22]

HMO enrollment in 1970 was around 6 million and now is over 13 million.

The HMO prepayment plans may affect many physicians if growth of this concept continues. HMO enrollment in 1970 was around 6 million and now is over 13 million. HMOs have grown from 60 in 1970 to over 325 today. This growth of an alternative medical-health care practice mandates evaluation by physicians concerned with both costs and cost effectiveness. Cost effectiveness of the HMO concept must be compared to our present system with regard to prevention, diagnosis, treatment outcome, and relief of suffering. Many perceive less dominance of the physician's role to just one member of a medical-health care team.[3]

Cost effectiveness defined as the ratio of the net medical-health care cost in dollars to effectiveness which is measured in lives saved or life years gained[23-25] is usually considered with regard to public policy on how much money will be spent for specific medical-health problems. Examples are: 1) organ transplants; (2) hemodialysis; (3) cancer chemotherapy; or (4) antihypertensive or cholesterol lowering drugs to prevent complications and loss of life from hypertension and atherosclerosis.

This concern of the public (government) and private (corporations and individuals) sectors with cost and outcome has changed the physician-patient relationship. The principles of Hippocrates stressed the individual nature of man and the physician's responsibility to the patient. Modern times, with the constraints of group insurance and tax dollars, stress the needs of the society as a whole rather than the individual. The spiraling cost of medical-health care and consumer advocacy and the perception that physicians have not performed well has resulted in a diminished controlling role for the physician in medical-health care issues.

Recommendations

We physicians should develop strategies for physician payments, cost effectiveness standards of practice, physician supply, and rationing of medical-health care.

Physician Payment

MAG has elected to continue the fee-for-service plan with a marketing strategy, probably an IPA which can contract with one or more HMOs. Fee-for-service may not be a viable option because it has been documented to be open ended and does not contain cost. It also seems to perpetuate the specialty-surgical-technology rather than cognitive and primary care type of practices. The fee-for-service plans which are based on usual, customary, and reasonable (UCR) fees are supported by the AMA and MAG. Some believe UCR to have been a boondoggle.[26] This concept has not resulted in competition which would favor the more cost effective physicians. Fees have continued to escalate due to new physicians with higher fee schedules entering the market and to the fact that increases only result in higher levels for "usual." Thus, the UCR concept has been open ended with no cap. Fees do not seem to relate to skill or training. Often, physicians with the least training and skills charge and collect higher fees than those established physicians with known superior skills. Some believe the charges by some specialists are entirely too high in terms of total patient contact time.[26] This concept favors the more costly fragmented specialty over primary care.

Relative Value Scale Fee Reform

Relative value scale fee reform (RVSFR) was considered in the October 15, 1984, meeting between the AMA; state, medical, and specialty societies; and HCFA officials. This would be a system to reform and make reasonable the UCR system with some cap on it. It would incorporate relative prices and absolute total payments for a particular physician service. This would be both for inpatient and outpatient services. The problem with this system is that usual and customary are used which tend to escalate beyond reason. It also requires the decision-making process of what is reasonable. This system could rectify inequities between cognitive and specialty-surgical-technology oriented physicians' services if "reasonable" is kept proportional and fair. Unless this is included, inequities will remain but with a cap on total physicians' expenditures which will inhibit growth in quantity and excellence of cognitive primary care. This will translate to fewer physicians electing cognitive primary care medicine and will perpetuate an expensive fragmented specialty surgical-technology type medical health care system.

It is also known that if beneficiaries have to share in the cost by paying larger deductibles, utilization decreases.

RVSFR will require coding reforms and different ways of deciding relative value perhaps on the basis of production costs, cost effectiveness, and time of physician-patient contact which can be paid at equal rates, except for minor corrections for training and cost effectiveness. Surgical-technical services could be placed on

bid or contract in order to encourage competition. RVSFR would need to be kept current by ongoing data evaluation. Multipliers of relative value scales could be used to contain costs also. Any system must reward cost effectiveness.

Prospective Payment System for Physicians

As with hospitals, the prospective payment system for physicians (PPSP) will demand rather than encourage cost containment. This system is much like cost sharing for beneficiaries with regard to their insurance; the physician is placed at risk to share in the cost control effort and to maintain effective service. This may be the best way to obtain efficiency and cost containment of our physician payment system.

Fixed Salaries

Support of the prepaid medical-health care concept has come from business corporations.[22] This system is supposed to increase cost effectiveness of physicians and enhance the economy of good management and reduced overhead. It is much like PPSP except that physicians in a group are paid salaries. A number of critical reviews have demonstrated these prepaid plans result in lower hospital/surgical utilization as compared to fee-for-service and thus, lower costs.[27-31] However, more recent analysis demonstrates that those who choose an HMO over a Blue Cross-Blue Shield plan are younger and healthier and had lower rates of hospital/surgical utilization prior to enrolling in the HMO.[32-34] Waiting lines are longer, and it takes longer for beneficiaries of HMOs to receive medical care, compared with fee-for-service.[35] Also, very few HMOs have significant numbers of Medicare-age enrollees.[36] Those enrollees are very costly. If patients of equal sickness or diseases are compared, then the cost savings of prepaid plans may not be so obvious. There are no critical studies on cost effectiveness of prepaid versus fee-for-service plans. What happens to the cost of these plans when the enrollees grow older and sicker is not known.

We physicians should develop strategies for physician payments, cost effectiveness, standards of practice, physician supply, and rationing of medical-health care.

Cost Effectiveness-Standards of Practice

We physicians must become more aware of cost effectiveness both for public health policies and for our individual practices. The cognitive-primary care approach probably will be more cost effective. In terms of public policy, which diseases, acute or chronic, should we attack? Chronic renal failure will probably be more cost effective if everyone with renal failure is not a candidate for either hemodialysis or transplant. Effective treatment of hypertension may be more cost effective, depending on which patients are put on antihypertensive drugs. Recently, the third Joint National Committee on Detection, Evaluation, and Treatment of High Blood Pressure recommended antihypertensive drugs for the following: (1) hypertensives 50 years of age or older when diastolic blood pressure measures consistently 90 mm of Hg or more; (2) hypertensives with target organ damage, diabetes mellitus, or major risk factors when diastolic blood pressure measures consistently 90 mm of Hg or more and; (3) hypertensives with diastolic blood pressure consistently 95 mm of Hg or greater.[37] There are some who believe this recommendation is too liberal and that those less than age 50 with diastolic blood pressure consistently 90-100 or 90-104 mm of Hg and no target organ damage should not take antihypertensive drugs.[38] The new recommendation will probably add at least 6 million new hypertensives on antihypertensive drug treatment to our medical-health care system.[39] This will add 2.2 billion dollars to our national health care bill. It is very doubtful this will be cost effective based on the known clinical trial data[38] and a cost effective assessment made in 1978.[40] Angiographic evaluation of patients with stable angina who are well controlled on antianginal drugs, with no evidence of resting ECG ischemic changes and good left ventricular performance, is not cost effective. Life span is not increased for these patients by coronary artery bypass grafting.[19] It would be more cost effective to decrease serum cholesterol if it was greater than 260 mg/dL.[41]

Cost effectiveness can be measured for individual physicians with computer assistance.[42] MAG should encourage this and develop programs to monitor cost effectiveness of the 467 diagnoses related groups. Standards of practice for what should be considered usual diagnosis and treatment of these DRG-related groups can be developed. These standards of practice could be monitored for cost effectiveness and compared in different or alternative practice plans.

Physician Supply

We now have one physician for every 500 persons in the United States, and this has increased, not decreased, our medical-health care costs. The MAG should continue efforts to convince our medical schools and state government to cut back on the medical school class size. At the same time, efforts should be made to increase state tax supported funding for our medical schools so the clinical faculty will not be in competition with other practicing physicians for the limited and relatively decreasing medical-health care dollar.[43] In addition, medical school post graduate programs should be encouraged to limit the number of trainees for specialty areas and put more emphasis on the cognitive primary care training. Scores required for specialty qualifications should be higher. Hopefully, this will increase the skills of these specialists. More emphasis on U.S. citizens for postgraduate programs and limiting the number of foreign

medical graduates is needed. Specialty medical societies should work with the postgraduate programs to encourage the above. In addition, we should limit even more the immigration of foreign medical graduates. Our State Board of Medical Examiners should be encouraged to raise significantly the test scores required to pass state board medical exams in order to be licensed to practice medicine.

Public Policy — Rationing of Medical-Health Care

MAG should bring to a public forum information about the mounting cost of medical-health care and the need for rationing if cost is to be contained. Perhaps discussions about cost effectiveness and ethics will result in public policy which dictates "who shall live."[3] There is no doubt we will have to recognize three forms of medical-health care: (1) one for the very poor which has finite limits on utilization; (2) one for those covered by insurance or third parties with some form of cost sharing; and 3) one for the very rich who can afford what is available — one in which third parties are not involved. There is no question cost is a barrier to medical care for the poor and free care does improve health, at least in the specific areas of blood pressure control and vision.[44] It is also known that if beneficiaries have to share in the cost by paying larger deductibles, utilization decreases.[45]

Conclusion

The cost of our medical-health care system has been documented. Suggestions have been made as to some solutions. We need to provide the best care for the funds available. How much is to be spent for our medical-health care will depend on physicians, patients, and public policy. Once public policy is fairly well delineated, physicians perhaps can continue with the principles of Hippocrates without interference from "third parties."

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A discussion of the epidemiology, clinical findings, diagnostic evaluation, and recent advances in therapy of the most common brain tumors in children.

Brain Tumors in Childhood

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BRAIN TUMORS are the most common solid tumors in children. There are approximately 1000 to 1500 newly diagnosed cases of CNS neoplasms in children each year in the United States.[1] In the past, brain tumors have been mostly incurable, with progressive neurologic disability leading to death within a few months. Advances in diagnostic techniques and therapy, however, have lengthened disease-free survival and improved the quality of life for these children. This article will discuss epidemiology, clinical findings, diagnostic evaluation, and recent advances in therapy of the most common brain tumors in children.

General Considerations

The incidence of CNS neoplasia for children under 15 years of age is 2.4 per 100,000. The incidence is the same for both black and white children. There is a slight male preponderance (3:2). The peak age of incidence is between 5 and 10 years of age, but age-specific incidence depends on histologic types.[2]

The incidence of specific histologic types of childhood brain tumors has not changed in any degree over the past 30 years. The largest histologic subtype of CNS neoplasms is the astrocytoma, which comprises 40-50% of all tumors seen. Next in frequency is medulloblastoma, at approximately 25% (Table 1).

The majority of childhood tumors are infratentorial (60%) in origin and as compared to adults, in which 75% of tumors are supratentorial. The most common infratentorial tumors are the cerebellar astrocytoma, medulloblastoma, ependymoma, and brain stem glioma. Of the supratentorial tumors in childhood, approximately 10-15% are in the suprasellar, hypothalamic, and pineal region. The remaining supratentorial tumors are located in the cerebral hemisphere.[3] The histologic subtypes also differ from those seen in adults.

TABLE 1 — Incidence of Brain Tumors in Children[3]

Types	*Percent*
Infratentorial (60%)	
Medulloblastoma	33
Cerebellar Astrocytoma	32
Brain Stem Glioma	16
Ependymoma	12
Other	7
Supratentorial (40%)	
Hemisphere Glioma	39
Craniopharyngioma	19
Optic Nerve Glioma	9
Pineal Region Tumors	6
Other	27

The etiology of most brain tumors remains obscure. Hereditary and environmental factors are certainly contributing causes. Hereditary diseases such as neurofibromatosis, tuberous sclerosis, and Von Hippel-Lindau disease, which are associated in varying degrees with tumors of the CNS, are inherited in an autosomal dominant fashion. Families have been reported in which several siblings developed brain tumors, suggesting a familial association.

Environmental factors that have been implicated in the etiology of brain tumors include ionizing radiation, infectious agents, and chemical agents. The study of Modan et al.[4] showed increased incidence of meningiomas in patients receiving radiation

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therapy for tinea capitis. Although viral, chemical, and physical agents are known to produce CNS neoplasms in experimental animals, the relationship of these agents to the development of tumors in humans is less clear. Interestingly, there have been reports of an increased incidence of brain tumors among children of parents who are employed in industries that involve chemical agents.[2]

Clinical Findings

Signs and symptoms of childhood brain tumors depend on a number of factors. These include tumor location and surrounding structures, size, growth rate, involvement of cerebrospinal fluid pathways, and the age and development of the child. Most commonly, children present with symptoms of increased intracranial pressure (ICP). Most childhood tumors are in the posterior fossa and cause their symptoms by compression of the fourth ventricle, obstructing CSF flow, leading to hydrocephalus and increased ICP. Symptoms include irritability, lethargy, vomiting, anorexia, headache, and changes in behavior (Table 2). In our experience, vomiting is the most common presenting symptom and is more likely to occur in the early morning shortly after wakening. A headache may or may not be present and in the very young child may manifest itself as irritability.

Many times there is a delay in diagnosis for weeks to months, with the symptoms of the brain tumor being attributed to a flu syndrome, gastrointestinal problems, school phobia, colic, or other illness. In one series of patients aged 1-16 yrs with cerebellar astrocytoma, the duration of symptoms varied from 1 week to 1½ years. The median time for duration of symptoms prior to diagnosis for all age groups was 2-3 months. The history was shorter in younger patients, with more than half of the children under 3 years of age having a history of less than 1 month. With medulloblastoma, the duration of symptoms was shorter. More than 50% of patients had symptoms less than a month. This may be explained by the more rapid growth of this tumor. Again, younger children had a tendency to have a shorter history.[5]

TABLE 2 — Common Presenting Symptoms of Brain Tumors

Symptoms	*Percent*
Headache	75
Vomiting	70
Disturbance of Gait	40
Mental Symptoms	35
Diplopia	25
Vertigo	25
Hemiparesis	15
Seizures	10
Head Tilt	10

Magnetic resonance imaging is a new modality which may be of value in the evaluation of pediatric brain tumors. Initial results suggest that it will at least be complimentary to if not replace CT imaging. . . .

This delay in diagnosis of several months with certain types of brain tumors is definitely longer than with other childhood cancers. This is extremely unfortunate, as the tumor that once was resectable may become unresectable with time or metastasize to the spinal cord or other sites, thus worsening prognosis.

Papilledema, which is a clear indication of increased ICP, may result in transient and intermittent blurred vision. Diplopia and strabismus may be noted because of sixth cranial nerve dysfunction. This nerve, because of its long intracranial course in proximity to bony structures, may become compressed with generalized elevated ICP. Visual complaints are usually not a common presenting symptom, as most children are not aware of progressive loss of vision.

In addition to the generalized effects of tumors, there may be focal neurologic effects, depending on location. With infratentorial tumors, these include truncal ataxia, loss of coordination, nystagmus, and head tilt. Brain stem tumors often show various cranial nerve abnormalities and long tract signs,

such as spastic gait, hemiparesis, and Babinski's sign (upgoing toes). Seizures are rare as early presenting complaints, occurring in only 10% of all children in one series with supratentorial tumors.[1] Midline tumors of the pituitary or hypothalamus may cause endocrine malfunction, visual field defects from impingement of the optic pathways, diencephalic syndrome, and personality changes.

Diagnostic Evaluation

A host of radiographic techniques are available for the diagnosis and follow-up of brain tumors. Of these, computed axial tomography (CT) has revolutionized the radiographic evaluation of these lesions. No other radiographic modality permits direct visualization of the tumor itself and its effects on the surrounding tissues. For most brain tumors, CT with intravenous contrast permits precise determination of the size, location, and extent of the lesion (Figures 1-3). In addition, characteristics of the mass, such as cyst formation, calcification, and hemorrhage, aid in predicting the tumor type. With CT, secondary effects such as edema, compression of normal tissues, and hydrocephalus may be visualized. Likewise, after therapy, the results of surgery, radiation, and/or chemotherapy on the mass and on the adjacent tissues can be followed. If a non-enchancing mass, or a very small extra-axial mass is suspected, metrizamide CT cisternography is another useful modality for defining a lesion and its extent. This is particularly useful for lesions of the optic pathways, pituitary infundibulum, brain stem, and cranial nerves.

Angiography may be complimentary to CT scanning to define the arterial supply to a lesion, locate the major draining veins, and evaluate the vascularity of a mass. Likewise, angiography is useful to exclude vascular malformations such as AVMs or venous angiomas which mimic a brain tumor. Standard skull films are used pre-operatively in determining the site of craniotomy placement and may reflect evidence of increased intracranial pressure. In the very young child with open fontanels, i.e., less than 2 years of age, ultrasonography may be used as an adjunct to CT to evaluate shunt function; however, it is not as precise in visualizing or characterizing the tumor itself.

Magnetic resonance imaging (MRI) is a new modality which may be of value in the evaluation of pediatric brain tumors. The energy source with MRI is a high frequency radio wave; thus, ionizing radiation is eliminated. Likewise, preliminary reports suggest that tumors can be visualized without intravenous or intrathecal contrast material. Dense bone (such as the skull base) results in artifacts with CT scanning; with MRI these artifacts are eliminated. Intensive research is being conducted at this

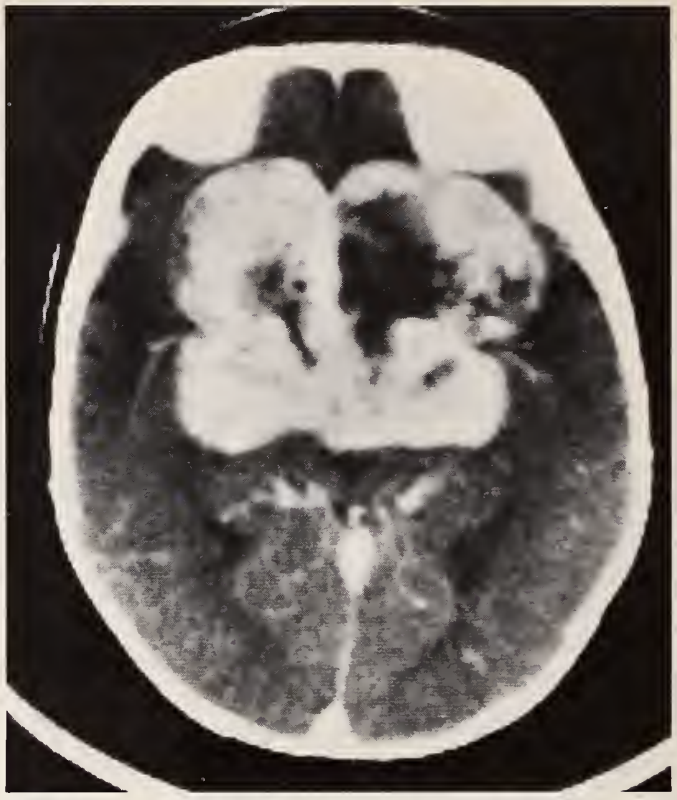


Figure 1 — A CT scan of a very large optic nerve glioma. The tumor enhances with a cystic portion in the center seen.

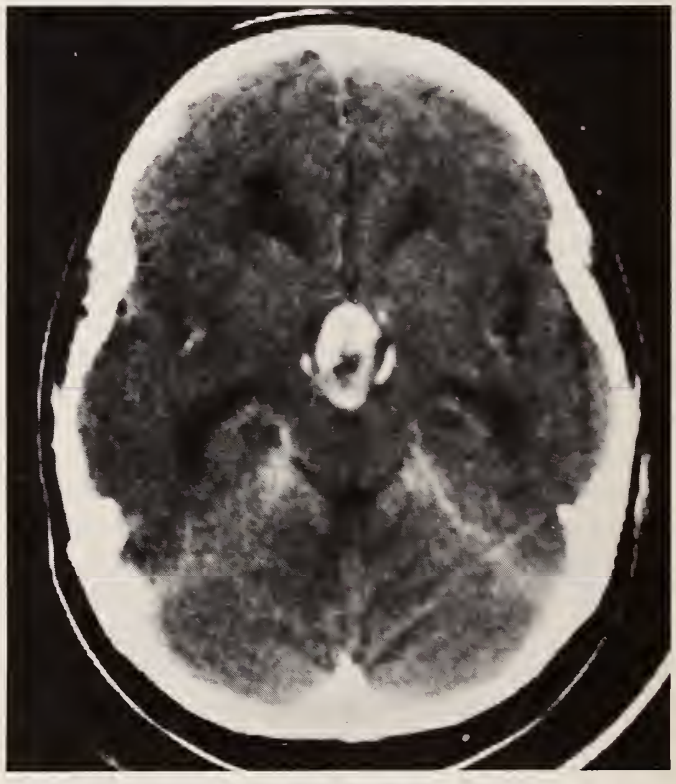


Figure 2 — A CT scan showing an enhancing mass in the vicinity of the third ventricle which when biopsied revealed an astrocytoma. Also seen are small enlargements of the temporal horns of the lateral ventricles consistent with hydrocephalus.

Center and in others to determine the role of MRI relative to CT. Initial results suggest that it will at least be complimentary to if not replace CT imaging for disease of the brain.

CSF examination can be very useful but must be done with caution even when there is no evidence of

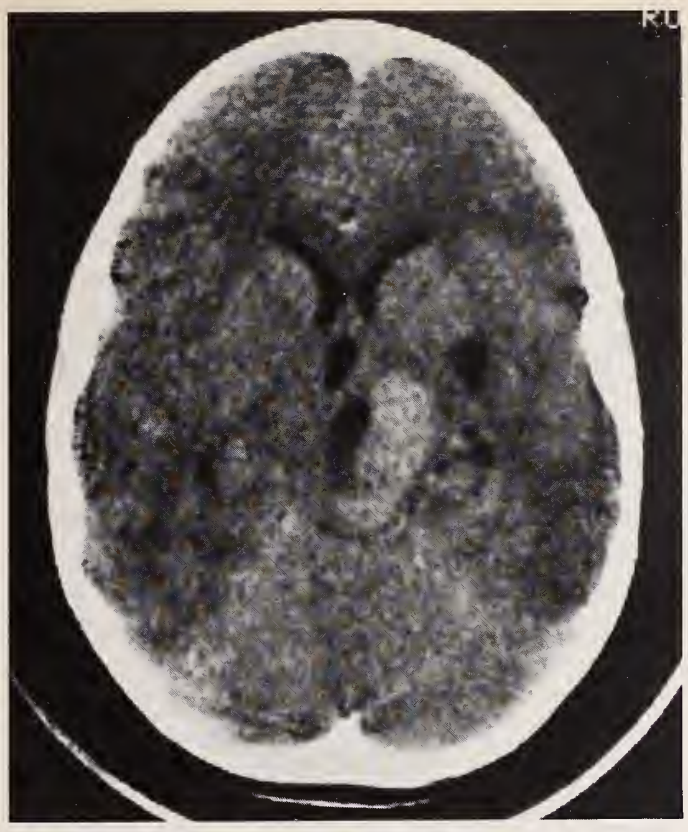


Figure 3 — An enhancing mass with a cystic component is seen in the thalamic region on this CT scan.

increased intracranial pressure. Only a minimal amount of fluid should be removed. After cytocentrifuge preparation, malignant cells may be seen. Posterior fossa tumors are most likely to spread to the cerebrospinal pathways, but supratentorial tumors may also. In one report, malignant astrocytoma in children spread to the CSF in 46% of cases.[6]

Specific Tumors

The most common infratentorial tumors are medulloblastomas, cerebellar astrocytomas, ependymomas, and brain stem gliomas. Medulloblastomas account for 30-40% of posterior fossa tumors and 25% of all pediatric brain tumors.[7] This tumor is rapidly proliferating and highly malignant. The cell type of origin is debated. It is generally felt that the tumor arises from undifferentiated cells with both neurogenic and gliogenic capabilities. These tumors are found predominantly in the vermis and midline of the cerebellum in younger patients, whereas they appear to extend more laterally in older children. Metastasis along the CSF pathways is common and occasionally occurs outside the CNS. Survival in most large series has been 30-35% for 5-year survival and 15-25% for 10-year survival.[8] Recurrence, unfortunately, may occur after disease-free periods of 5 years or more.

Cerebellar astrocytomas account for approximately 30-40% of infratentorial tumors and 20% of all brain tumors in children. The mean age of incidence is 6 to 7 years. It is a slow-growing tumor, and symptoms are usually of a longer duration prior to diagnosis than other infratentorial tumors. Usually it is a well differentiated tumor and may be cystic or solid. It has one of the most favorable prognoses of intracranial tumors, although it is not as benign a disease as once thought. Davis and Joglekar[7] reviewed the clinical and pathologic findings in 43 patients who were treated surgically for cerebellar astrocytoma. Prognosis was related to extent of surgical removal. Of 25 patients with total tumor resection, only 1 died, whereas 5 out of 18 patients (28%) with subtotal resection died. Total survival in this series was 84%.

Ependymomas occur anywhere in the neuraxis where ependymal cells are found but most commonly arise in the fourth ventricle. They account for 10-15% of all brain tumors of childhood.[9] Five-year survival rates have been reported from 10-46%.[9-11]

Brain stem gliomas account for 15-20% of infratentorial tumors and 10% of all brain tumors in the young most commonly arising in the pons. These neoplasms often grow large before becoming symptomatic, because they infiltrate the brain stem rather than compress the ventricular system. The anatomic location of brainstem tumors frequently provides many cranial nerve and long tract signs. Survival of patients is extremely poor, with a median survival time of 1-2 years.[9] The overall 5-year survival rate supported by most investigators is approximately 10%.[12]

Treatment

Once the diagnosis of a brain tumor is made, treatment modalities include surgery, radiation therapy, and chemotherapy. The treatment plan depends on the neoplasm and its location. A team approach is the most effective therapy, with coordination and cooperation between surgeon, radiation therapist, oncologist, neurologist, and psychologist. Usually the pediatric oncologist serves best as the coordinator and provider of basic care.

A thorough pre-operative workup should be done. Workup should include blood counts, serum chemistries, bone marrow aspiration, chest x-rays, skeletal survey, myelography, and examination of CSF. Some brain tumors, especially medulloblastoma, may metastasize down the spinal column or outside the CNS.

Surgery is the treatment of choice. Even when the tumor cannot be completely removed, surgery can achieve decompression and reduce the tumor bulk so that other forms of therapy can be maximized. The neurosurgeon must make every effort to resect as much of the tumor as possible. The degree of surgical resection may affect the prognosis. Obtaining a biopsy is always important so that the most effective

chemotherapy can be used. Microsurgical techniques and the CT scan have greatly expanded the possibility of surgical approaches to tumors in sensitive areas. Ventriculo-peritoneal shunts should not be placed pre-operatively unless absolutely necessary because of the possibility of tumor metastasis along the shunt pathway.

Radiation therapy is a valuable adjunct to surgery in treating unresected or partially resected tumors. Unfortunately, the nervous system has a finite tolerance to radiation therapy, and that tolerance is often below what is required to control the tumor. In addition, since survival is being prolonged, many late side effects are now becoming evident. Mild to moderate mental retardation was seen in 5 of 12 long-term survivors of primary brain tumors given radiation therapy prior to 2 years of age.[15] Learning disabilities, deficits of visual perception, and memory defects have been seen and are especially likely in children diagnosed prior to 6 years of age.[15] Modest doses of radiation therapy rapidly suppress normal hematopoiesis. Tubiana and coworkers[14] observed depression of bone marrow a decade after radiotherapy. Growth hormone deficiencies also may occur following cranial radiation. The degree of impairment appears to be a function of age at the time of treatment, radiation dose, and time elapsed between treatment and testing. Treatment before age 13 years carries a risk of diminished growth hormone production of approximately 70%, twice the risk for the older child.[15] When diminished growth is documented, administration of growth hormone may reverse this deficiency.

Chemotherapy has lagged behind in the treatment of brain tumors compared to other tumors of childhood but is beginning to achieve comparative effectiveness. MVPP (methotrexate, vincristine, prednisone, and procarbazine) has been shown to be effective for recurrent medulloblastoma and currently is undergoing trials in the treatment of primary tumors after surgery and radiation in comparison with radiation alone. Other chemotherapy effective in brain tumors includes the nitrosureas.

New agents presently in phase II studies such as aziridinylbenzoquinone (AZQ) and dibromodulcitol (DBD) have produced favorable responses. In our institution, several children have had stabilization or improvement in size of their tumors after treatment with AZQ. These include astrocytomas and brain stem gliomas.

Looking to the future, the diagnosis and treatment of brain tumors may be aided by monoclonal antibodies. These are antibodies that are the product of a single clone of B-lymphocytes. Under controlled laboratory conditions, they can be mass produced and directed against any chosen antigen, e.g., a protein on the surface of medulloblastoma cells. Monoclonal antibodies have been used extensively in the diagnosis of leukemia. In the future, they may be a powerful tool in the diagnosis and treatment of brain tumors. By using a panel of monoclonal antibodies, it may be possible to classify tumors with respect to their histology. Tumor detection in vivo may also be enhanced. Unlike radionuclide markers which localize to areas of inflammation, monoclonal antibodies localize to tumor cells themselves and may be able to detect small tumors which may have gone unnoticed. Because of this localization to tumor cells, they may serve as a vehicle to deliver various tumoricidal agents to precise areas of tumor involvement. Research on monoclonal antibodies is developing at our institution.

Referrals from community hospitals into institutions is important in advancing the knowledge about childhood tumors. Only with the accrual of many patients can the effectiveness of new drugs be evaluated. With an organized team approach and development of effective chemotherapeutic agents, the therapy of childhood brain tumors can become as successful as other childhood solid tumors.

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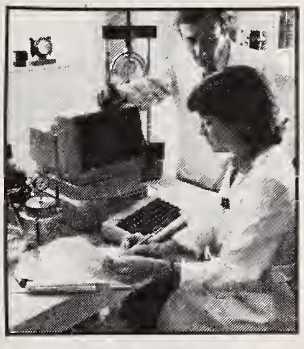
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The proper management of the pregnant patient following major trauma requires an understanding of the anatomic and physiologic alterations of pregnancy and the altered patterns of injury which result.

Blunt and Penetrating Trauma During Pregnancy: Four Cases

M. RICK TIMMS, M.D., CARL R. BOYD, M.D., and ROBERT D. GONGAWARE, M.D., *Savannah**

Abstract

The anatomic and physiologic alterations of normal pregnancy are reviewed, and the effects of abdominal trauma, both blunt and penetrating, are examined. Four cases, representing the observed patterns of traumatic injury during pregnancy, are presented. Two cases of blunt abdominal trauma with fetal death secondary to skull fracture and abruptio placentae are presented. A case of blunt abdominal trauma with liver laceration, exploratory laparotomy, and subsequent cesarean section following development of maternal respiratory failure is also discussed. Finally, a case of gunshot wound to the uterus with nonlethal injury to a near-term fetus is presented. The management of the traumatized patient during pregnancy, with reference to these specific cases, is discussed.

In today's active society, the pregnant woman is increasingly exposed to accidental injury. Although infrequently reported, trauma is the leading non-obstetrical cause of maternal death, accounting for 16-22%.[3, 6] The proper management of the pregnant patient following major trauma requires an understanding of the anatomic and physiologic alterations of pregnancy and the altered patterns of injury which result.

* From the Department of Surgery, Memorial Medical Center, Savannah, Georgia. This paper was presented at the combined meeting of the MAG Scientific Assembly and the Chapter Meeting of the American College of Surgeons in Atlanta, November, 1983, and was winner of the Residents Competition. Send reprint requests to Dr. Timms, Memorial Medical Center, Department of Surgery Education, P.O. Box 23089, Savannah, GA 31403.

Several anatomic and physiologic considerations may complicate the management of these patients. Abdominal wall changes during late pregnancy, the displacement of abdominal viscera, and the physiologic ileus of pregnancy may modify physical findings. The bladder is usually full and subject to rupture with direct trauma. The pelvic vascularity in pregnancy increases the risk of maternal hemorrhage and complicates the intra-operative evaluation of the pelvis.

A physiologic hypervolemia permits 10-20% acute and up to 35% gradual blood loss without a change in vital signs.[4] Uterine blood flow, however, may be decreased as much as 20% as the mother maintains homeostasis at the expense of the fetus.[2, 7] While cardiac output is increased, the CVP may be decreased in late pregnancy because of vena cava compression by the uterus, which limits venous return. A normal leukocytosis with mean white counts of 18,000 and a physiologic anemia with mean hemoglobin of 12.1 may be seen.[3] Alterations of the coagulation system improve the maternal response to hemorrhage but also increase the risk of thrombosis and coagulopathy.[13] Increased levels of fibrinogen and factors VII, VIII, and IX, combined with decreased levels of plasminogen activator, may help control maternal bleeding from non-obstetrical injury. Injury to the placenta, however, with release of thromboplastin, or to the uterus, a major source of plasminogen activator, may produce DIC or secondary fibrinolysis.[10]

The epidemiology of traumatic injury in pregnancy is roughly that of the general population, with vehicular accidents and assaults accounting for 71% of injuries.[13]

Blunt Abdominal Trauma

During early pregnancy, the uterus is protected within the bony pelvis and the fetus is further protected from blunt injury by the surrounding amniotic fluid. In late pregnancy, the uterus extends beyond the pelvic confines and protects other organs by acting as an hydraulic shock absorber. This protective effect is most dramatic with penetrating injury, and the blunt injury pattern remains largely unaffected, with spleen, liver and kidney heading the list of associated intra-abdominal injuries.[6]

Direct Fetal Injury — Direct injury to the fetus during blunt trauma usually occurs late in pregnancy when the fetal head is fixed in the pelvis and the amniotic fluid/fetal ratio is reduced. Although various skeletal fractures have been reported, skull fracture with intracranial hemorrhage is the most common fetal injury from blunt trauma.[3] It may occur with or without pelvic fracture and usually results in fetal death.

Case 1: *An 18-year-old primagravida, 36 weeks gestation, complained of severe abdominal and lower back pain after an automobile accident. Vital signs were stable. Multiple contusions of the head and extremities were noted. The abdomen was tense, 36-week size, with abrasions over the right upper quadrant. Fetal heart tones were 150 by doppler. There was 30‰ effacement, 1 cm. dilatation with vertex presentation.*

X-rays of the skull, spine, and pelvis were negative. Displaced fractures of the right ulna and right ankle were stabilized. Vital signs remained stable. Six hours after admission, however, fetal heart tones became undetectable by doppler. A fetal heart rate of 140 was noted at emergency ultrasonography. Twelve hours after admission, fetal heart activity could not be identified with ultrasound. Twelve hours later, spontaneous rupture of the membranes was followed by delivery of a 5 lb. 9 oz. stillborn male. Postmortem of the fetus revealed bilateral parietal skull fractures with periosteal, epidural and subarachnoid hemorrhage.

In this case, fetal death resulted from traumatic skull fracture and was soon followed by the onset of labor. Fetal death is usually followed by labor within 1 week, and retention of the dead fetus beyond 5 weeks greatly increases the risk of coagulopathy.[13]

Uterine Rupture — Uterine rupture from blunt trauma is rare, occurring during automobile accidents, with ejection from the vehicle or from seat belts improperly placed above the fundus. Massive hemorrhage and shock may ensue, or with rupture in the contractile fundus away from major vessels and with complete extrusion of the fetus, bleeding may be minimal.[3] Fetal survival is extremely poor. Complete avulsion of the uterus and isolated injuries of the cord from intra-uterine compression have been reported. Traumatic rupture of membranes may occur and increases the risk of infection and cord prolapse.

The preservation of maternal homeostasis is essential for fetal survival.

Abruptio Placentae — Together with maternal death, premature placental separation is the leading cause of fetal death in blunt trauma.[6] The inelastic placenta is sheared from the uterine wall with bleeding into the decidua, complicated by the release of thromboplastin and plasminogen activator. Separation of less than 25% of the placental surface usually produces external bleeding and premature labor. With greater than 50% separation, fetal death usually results.[6] Maternal mortality is very low, unlike fetal mortality, which ranges from 30-68%.[12] Crosby[6] suggests that if fetal oxygenation is impaired, labor or fetal death will occur within 48 hours.

Case 2: *After an automobile accident, a 17-year-old primagravida was hypotensive but responded rapidly to volume replacement. Abdominal exam revealed a near-term uterus with contusions noted at the left iliac crest. No fetal heart tones were detected. The cervix was*

closed, with no bleeding noted. Gross hematuria was followed by normal cystogram, but IVP suggested renal fracture. Hemoglobin was 12.7 with normal coagulation profile. The renal injury was treated with continuous bladder irrigation, and the patient was admitted to the ICU. Spontaneous rupture of the membranes produced a large amount of dark blood with amniotic fluid. Hemoglobin fell to 11.5 with decreased fibrinogen and strongly positive fibrin split products. Four hours later, an 8 lb. stillborn male was spontaneously delivered. A large retroplacental clot occupied 30‰ of the placental area. The patient rapidly stabilized and was discharged on the tenth hospital day.

This case of concealed placental separation illustrates the usual clinical course, with early evidence of fibrinolysis resulting from placental injury.

Temporal-Causal Relation — Because the incidence of abortion and premature labor in normal pregnancy (7-15%) approximates that seen following major trauma (10%), a causal relationship between trauma and interruption of pregnancy is difficult to establish.[6] This is often an important medicolegal point. It has been suggested that to prove abortion due to trauma, the fetus must be demonstrated to have been developing normally and aborted within hours of the traumatic event.[9]

In blunt trauma, pregnancy only slightly alters the maternal outcome and assuming maternal survival, fetal outcome is determined primarily by the extent of injury to the uterus, cord, placenta, or the fetus itself.

Penetrating Abdominal Trauma

In penetrating trauma, the gravid uterus protects other intra-abdominal viscera by pushing the bowel out of the pelvis and thus sustains the majority of penetrating injuries, usually from gunshot and stab wounds. The maternal mortality for gunshot wounds to the gravid uterus is 9%, with associated visceral injuries occurring in only 20-30% of cases.[11] Fetal mortality is much higher, approaching 75%.[3] Although low velocity missiles may lodge in the muscular uterine wall, direct injury to the cord or placenta from stab or gunshot wounds may also occur. Stab wounds to the pregnant uterus are infrequently reported and rarely fatal.

Case 3: *A 27-year-old woman at 36 weeks' gestation sustained a single gunshot wound to the right lumbar region. Vital signs were stable, with an entrance wound located to the right of the midline at the level of L-3. Fetal heart tones were audible at 160. Urinalysis was negative. Abdominal films showed a single bullet in the anterior abdomen at the L-4 level. Broken fetal bones were also noted. At C-section, a live male infant with five bullet wounds of the right arm and leg was delivered. No bullet was found in the uterus or abdomen. Abdominal exploration revealed no visceral injury. X-rays of the infant revealed fractures of the right radius and distal femur, with a bullet located medial to the distal fibula. These fractures subsequently healed with the bullet fragments in place.*

In this unusual case, a gunshot wound to the uterus resulted in a non-lethal injury to a near-term fetus with no associated maternal injury, clearly demonstrating the protective effect of the gravid uterus in late pregnancy.

The epidemiology of traumatic injury in pregnancy is roughly that of the general population, with vehicular accidents and assaults accounting for 71% of injuries.

Pelvic Fractures — Use of an external fixation device with major pelvic fractures will help control bleeding and permit early ambulation. Urologic injury may occur, but only rarely does pelvic fracture interfere with vaginal delivery. In the absence of gross pelvic deformity, labor should be allowed to proceed normally.[4]

Disordered Maternal Homeostasis — The preservation of maternal homeostasis is essential for fetal survival.

Maternal shock significantly decreases fetal blood supply and when accompanied by hypoxia may produce fetal distress as the mother maintains homeostasis at the expense of the fetus; to insure fetal survival, insure maternal survival.

Case 4: *A 21-year-old woman at 7 months' gestation complained of abdominal pain after an automobile accident. Vital signs were stable. The abdomen was mildly tender, 30-week size, with fetal heart tones audible at 140. Hemoglobin was 9.7, but fell to 9.2 following two units of packed cells. Abdominal tenderness increased, and 7 hours after admission the*

patient underwent exploratory laparotomy with drainage of a large, non-bleeding liver laceration. No other visceral injury was noted, and the uterus was intact. The patient did well for 24 hours. However, respiratory failure necessitated cesarean section with delivery of a 33-week viable female. Postoperatively, the patient improved rapidly and was discharged home.

This case follows the observed pattern of maternal injury in blunt trauma, with both solid viscus and remote pulmonary injury, and also illustrates the selective use of obstetric intervention in the face of maternal hypoxemia and impending fetal distress.

Management of Major Trauma in Pregnancy

Although pregnancy may alter the approach to diagnosis and management, routine aggressive resuscitation should be initiated, with establishment of an airway, control of hemorrhage, and early replacement of blood loss. Vasoconstrictors should be avoided in hypovolemic shock, particularly in pregnancy, while proper positioning of the patient may improve venous return. Essential x-rays should be performed without hesitation, avoiding duplication, and with proper shielding when possible. Peritoneal lavage or culdocentesis may help identify intraperitoneal bleeding.[3]

Diagnostic Procedures — In some cases, sonography and amniocentesis may help determine the need for obstetric intervention, but electronic fetal monitoring is essential and should be employed in all cases of trauma during late pregnancy.

Management — Following uterine rupture or significant placental separation, rapid exploration and fetal delivery provide the only chance for fetal survival. With evidence of visceral injury, laparotomy should be performed to control hemorrhage. Laparotomy is generally indicated in penetrating trauma and should be performed as if the patient were not pregnant. Minor perforations or lacerations of the uterus can usually be repaired without interrupting the pregnancy.[3] Laparotomy is not an indication for cesarean section, which should be performed at laparotomy only:

1. If the risk of fetal distress outweighs that of prematurity.
2. If the uterus is ruptured.
3. If the gravid uterus interferes with surgical exploration.
4. If there is imminent or impending maternal death.

Fetal death is best managed by subsequent induction of labor when the mother is stable. Labor and delivery are well tolerated even a few hours after laparotomy.[3]

Postmortem Cesarean Section — Very rarely, postmortem cesarean section may be indicated to salvage an otherwise viable fetus. Survival is dependent upon both gestational age and the elapsed time from maternal death to delivery, with the best chances of success limited to within 5 minutes of death. Delivery of a non-viable fetus is undesirable; however, postmortem C-section should certainly be attempted in all cases beyond 28 weeks' gestation.[3]

Conclusion

In our active society, trauma in pregnancy is increasingly common, presenting the unique challenge of managing two distinct but interdependent lives. The traumatized mother, compromised by her pregnancy, and the fetus, dependent on the welfare of the mother, present a variety of medical, legal, and ethical questions. Recognizing the altered patterns of, and response to, traumatic injury during pregnancy, and utilizing the basic principles of trauma care, we can hope to preserve maternal well being and thereby provide the best chance for fetal survival.

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A description of the educational requirements and practice opportunities of Doctors of Osteopathic Medicine.

Are D.O.s Real Doctors?

CATHY M. GARRIS, *Tucker**

Editor's Note: Since the MAG House of Delegates has appointed a committee to discuss the acceptance of osteopathic members, we thought this article timely. We have done no editing and do not intend to offer any articles to counter this but would appreciate comments from our readers. Provoking thought is one of the objectives of the Journal, *and we would like to hear your thoughts concerning this and any other* Journal *article.*

D.O.— Doctor of Osteopathic Medicine. Although there are currently over 22,000 osteopathic physicians practicing medicine throughout the United States, the D.O. (Doctor of Osteopathy) is probably one of the most misunderstood medical practitioners.

Background

Founded in the late 1800s by Dr. Andrew T. Still, a traditionally trained M.D., osteopathic medicine was an alternative to the primitive practice of medicine which existed at that time. There were no modern wonder drugs; leeches were frequently used for bloodletting and surgery was performed under unsanitary conditions. Sometimes the cure was worse than the disease itself.

Dr. Still believed the medical profession took too narrow a view of disease — treating it as a separate entity rather than considering the person as a whole unit. He believed there was an interdependency of the body's systems: circulatory, nervous, and musculoskeletal. Eventually, his work in anatomy and related disciplines led him to the innovative approach to doctoring that became the osteopathic profession.

Based on the premise that the body's own natural antibodies, if stimulated, could help in the healing process and that many diseases could be diagnosed by touching the skin and palpitating certain areas of the body, Dr. Still's principles and practices began to show results. In 1892, Dr. Still founded the first college of osteopathic medicine, the American School of Osteopathy, in Kirksville, Missouri.

As osteopathic medicine flourished, research also continued into Dr. Still's theory of the body as an integrated unit in which no part functioned independently. The fundamental contribution of this research was the recognition that the body's musculoskeletal system played an important role in the body's continuing effort to overcome disease. Thus developed a system of diagnoses and therapy that when employed in conjunction with other standard medical procedures proved highly beneficial in the treatment and prevention of disease. It also stressed the fact that musculoskeletal problems are often a cause of dysfunction in other body systems, and that manipulative procedures applied through specifically directed corrective forces helped tense muscles, tendons, and connective tissues surrounding joints to relax. The resulting increase of muscle fiber length eased the tension of the proprioceptors, thus reducing sensory bombardment to the spinal cord. Reduction of this bombardment, in turn, would allow the entire body to return to a more normal homeostatic level.

It should be noted that although osteopathic physicians find manipulative procedures very effective, they are considered only one of the many "tools of the trade" to be used in diagnosing and treating certain illness and disease.

Another important tenant of the osteopathic profession is the emphasis placed on primary care. Latest statistics indicate that D.O.s overwhelmingly (92%) choose to practice primary care, with some

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87% choosing general practice. Why is this? Many believe it is the emphasis placed on primary care early in their education and training. The general practitioner is held in high esteem and students in osteopathic medical schools are encouraged to develop themselves as a generalist. D.O.s are trained, for the most part, in osteopathic hospitals; many locate in rural or small communities where their role models are usually primary care physicians.

As osteopathic medicine flourished, research also continued into Dr. Still's theory of the body as an integrated unit in which no part functioned independently.

The osteopathic profession grew slowly in the first part of the 1900s, due in most part to opposition from the American Medical Association. Today, however, there are 15 colleges of osteopathic medicine, and the osteopathic profession is considered one of the fastest growing health professions. D.O.s are expected to double their numbers within the next 10 years.

Educational Requirements

Education in schools of osteopathic medicine is very similar to that of allopathic or M.D. schools. There is stiff competition for available seats each year, and most applicants must have an undergraduate degree strong in the sciences. The Doctor of Osteopathy degree requires four academic years of study: 2 years devoted to anatomy, physiology, chemistry, pathology, microbiology, immunology, and pharmacology, and 2 years to clinical subjects. Of course, inherent to all osteopathic study, is the interrelationship of structure and function as reciprocal factors in health and disease. Structural factors and disease processes are stressed, and students are trained in osteopathic manipulative therapy and in medical, therapeutic, and surgical procedures.

After completion of a 1-year rotating internship, D.O.s may be licensed in *all 50 states* to practice medicine and surgery and to prescribe medication. Some states have duel licensing boards. In Georgia, however, the Composite State Board of Medical Licensure *(sic),* which licenses *all* physicians, is comprised of *both* D.O.s and M.D.s. In fact, the president of the Board this year is a D.O., Dr. Joseph Vinci, of Statesboro.

If the D.O. chooses to specialize, there are more than 40 residency programs accredited by the American Osteopathic Association (which is approved by the U.S. Department of Education to accredit the education and training programs of the osteopathic profession). The rotating internship is felt to be essential in developing a broad-based clinical foundation for successful specialty skill acquisition during residency training as well as entrance into general practice. The internship must include 3 months' rotation in general medicine, general surgery, and 1 month each in general practice, OB/GYN, and pediatrics. The remaining 3 months are spent in various combinations. Again, because most D.O.s don't train in big city universities, they tend to feel more comfortable establishing a solo general practice in a rural or small community.

D.O.s sometimes take residencies in M.D. institutions and in the armed forces. For the most part, hospital privileges are open to osteopathic physicians.

Summary

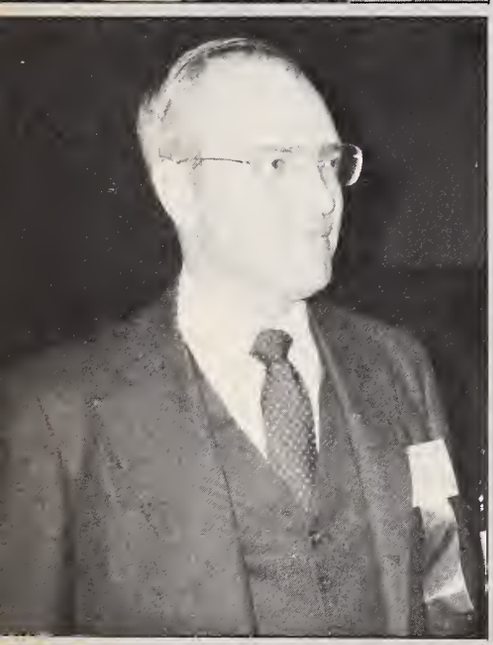
The D.O., like the M.D., has full practice rights in all 50 states. They practice in both osteopathic and allopathic hospitals, perform surgery, deliver babies, prescribe medication, and use all modern day therapies. They participate in third party reimbursement, Medicare, and Medicaid. Their education and training is comparable to the M.D., and they have positions of prominence in the armed forces and government health care facilities. In addition, they incorporate manipulative procedures in diagnosing and treating certain illnesses and disease. The majority tend to practice primary care in small, rural areas, with some 87% choosing general practice.



(Left) Moderator for Friday's full-day session was Dr. S. William Clark, MAG President. At the start of the program he explained how MAG's Leadership Conference, begun in 1982, had evolved into a meeting important for all Georgia doctors. "It's a 'what's-happening-to-you' conference," he said.

(Below) Outside the meeting room, three conference attendees discuss what they've heard. From left to right is Dr. Billy Burk from Rome, Dr. John Watson of Columbus, and Dr. Charles A. Lanford from Macon.





(Left) As keynote speaker, Dr. Ned Lamkin from Indianapolis challenged physicians to strive to retain traditional values of patient care in the new medical marketplace. In response to repeated requests, The Journal *will soon publish the text of his address.*



(Above) Dr. John O'Shaughnessey from Macon, one of our speakers during Friday morning. Dr. O'Shaughnessey explained how physicians have been effective in monitoring the costs of medical care, identifying duplicated charges or services, and avoiding overly expensive procedures.



(Left) On Friday morning, Nathaniel Johnson, Chairman of the Greater Atlanta Coalition on Health Care, spoke on how businesses were seeking ways to solve the problems of spiralling medical costs.

editorial
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editorial

The Status Quo Is No More

GIVEN THE ELEGANT SETTING of the Waverly Hotel in Northwest Atlanta, the attendees at the Third Annual MAG Leadership Conference had the opportunity to hear a variety of presentations concerning the status of the medical care delivery system. The entire conference was focused on the delivery system itself, considering various modifications of our current system as well as the introduction of some innovative thoughts for reform and improvement. It was apparent from the many attendees at this conference that they were looking for help, that they perceived that a multitude of problems existed within the environment of today's medical care system, and that the solutions must be found, or else. The "or else" part of the equation was not outlined in any detail but certainly was felt to exist.

The common theme [of the MAG Leadership Conference] centered around the importance of physician involvement in order for physicians to maintain their control in the medical marketplace.

The groundwork for the weekend's discussion was described in a keynote introductory address by Dr. Henry Lamkin of Indianapolis, outlining the major problem existing today, namely that our society wants the best in medical care but seems to have decided that it can no longer afford that care. It became apparent throughout Dr. Lamkin's talk, as well as from the rest of the speakers, that the overriding and overwhelming concern is just how much is being spent for medical care and whether this expenditure is justified. Dr. Lamkin pointed out very forcefully that people are getting more for their money today and that physicians, as a group, need to inform the public and "tell that story." Dr. Lamkin also asked two very provocative questions that remained unanswered: (1) Was medical care better with a two tier type system that existed prior to 1965? and (2) How do we retain the values (which physicians hold to be almost sacred) in the new environment of the medical care delivery system? He also suggested that physicians become more involved in the administration of the medical care system and that indeed it was their responsibility to do so. Otherwise, how can physicians complain, because they will certainly get what they deserve if they abdicate this responsibility to other segments of our society.

This theme of physician involvement carried through the majority of the speakers in the remaining portions of the conference. A panel discussion involving representatives from the business coalition, hospital administrators, and individual physician activities discussed several mechanisms for improving our current situation. It was specifically noted by Mr. Nathaniel Johnson of the Atlanta Business Coalition (and Vice President for Corporate Human Resources of Bell South Corporation) that the medical marketplace is not a free market and that the activities

of business and labor had created a third party payor responsibility with first dollar coverage that was responsible for this distortion. By combining this problem with inflation and exploding medical technology, and adding the profound acceleration related to medical liability, today's medical marketplace has become very volatile. Consequently, solutions were not going to be easy and now businesses were in the process of shopping for various control mechanisms, wellness programs, and any other avenue that might result in a solution. Mr. Johnson did report that the business coalition felt it could make utilization review considerably more efficient. He said they were looking for a rather large grant from the Robert Wood Johnson Foundation to support their activities in this regard.

Hospital administrators Ernest Bacon, West Paces Ferry Hospital, Atlanta, and Charles Foster, Jr., West Georgia Medical Center, LaGrange, discussed the relationship of the investor-owned and not-for-profit facilities, respectively, as they related to this marketplace. Both seemed to feel that the introduction of competitive forces would be helpful but that it required the cooperation of the hospital facilities and the physicians in order to prevent unnecessary duplication of services while making available the full service medical care to the communities.

Dr. John O'Shaughnessey, a private practitioner from Macon, described a typical example of physician involvement in monitoring hospital care and physician's fees that has been very effective in increasing physician's awareness concerning the costs of hospital care and various illnesses. This had been accomplished through an interspecialty committee within his county medical society analyzing charges, determining duplication of charges and services, and identifying the relatively expensive procedures and treatment patterns that did not seem to be any more effective in overall care.

It was readily apparent that the status quo of medical care delivery is no longer acceptable and that major revisions are not only necessary but also imperative.

A somewhat different perspective was outlined by two speakers addressing the individual physician in his/her specific activities. Steven Falken, Ph.D., a former Wall Street economist, emphasized that individual physicians must evaluate their own situations from the viewpoint of the changing environment and the current competition. Physicians must raise their level of self esteem to change the emphasis of their activities from being a simple technician or pill pusher to one of an individual who removed illness, maintained health, or indeed enhanced life. He also encouraged a more aggressive attitude, asking physicians to look for more illness to remove, to devise different ways to remove such illness, and to look for more patients to improve.

As a compliment to the previous discussion, Dr. Andrew Morley, of Decatur and President of the Georgia Academy of Family Physicians, introduced a concept that has been foreign to most physicians' thinking, certainly from a traditional standpoint, when he described the methods by which a physician could market his individual practice. He pointed out that the misconceptions about marketing being overly complicated, unethical, and involving advertising had been drawbacks to physicians for years. In the decade of the 80s, it is apparent that physicians are dealing with a decreasing individual practice population, or faced with strong competition, and it is important for them to develop strategic planning for management as well as for marketing in order to survive the ever-changing landscape.

Representative Henson Moore (Republican, Louisiana) delivered a very informative talk from the perspective of the House Ways and Means Committee as he described the issues that seemed to be paramount in Washington. Representative Moore did make a somewhat surprising statement in his address, saying that the Medicare system hasn't worked, commenting that the physicians had told Congress prior to its inception that it wouldn't work, and that the facts had borne this out in



(Left) Dr. William D. Logan takes his seat. A thoracic surgeon in Atlanta, Dr. Logan is President-elect of the Association. He will assume the presidency this April 27.



(Above) Gould Hagler, MAG's Assistant Director of Medical Practice, addresses the Conference on plans being developed for the Georgia Physicians Organization. Staff research for this proposed statewide alternative delivery system was authorized by the MAG House of Delegates last October.



(Left) Mr. Thomas Hoban, Executive Vice President of the Hennepin County Medical Society, told us how physicians in Minneapolis had organized to compete with local HMOs.



(Above) Dr. Dan Bateman of Albany chats with Dr. Jack Menendez of Macon. The Leadership Conference drew over 200 physicians to the Waverly Hotel in Atlanta.



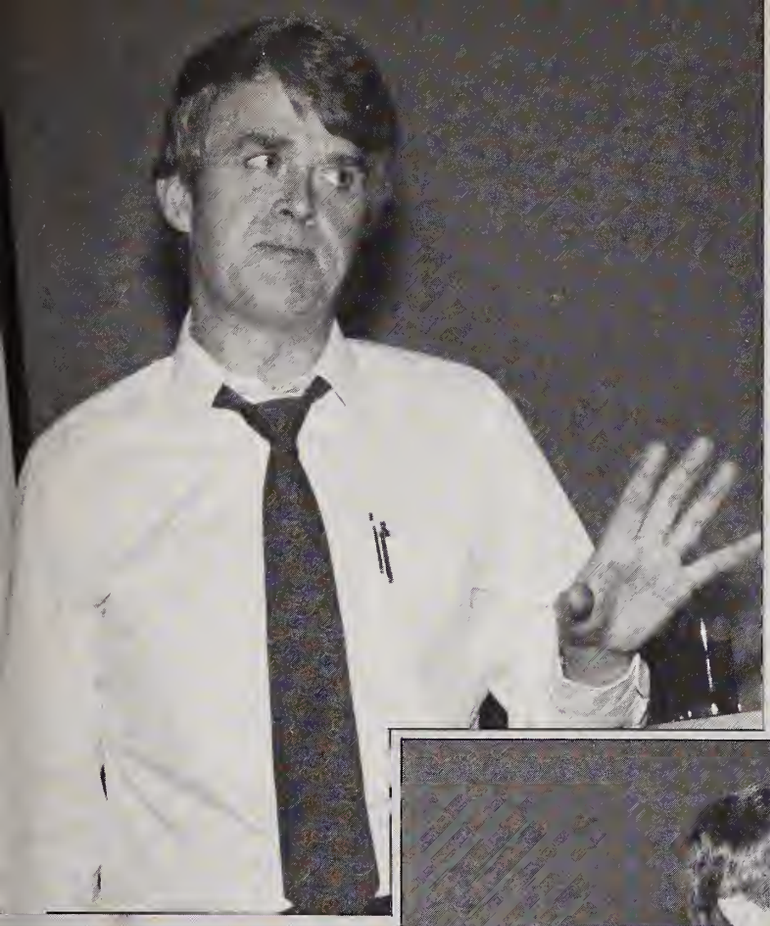
(Left) Congressman Henson Moore addressed the Leadership Conference on Friday afternoon. A member of the House Ways and Means Committee, Representative Moore discussed possibilities of improving the Medicare system in order to contain costs.

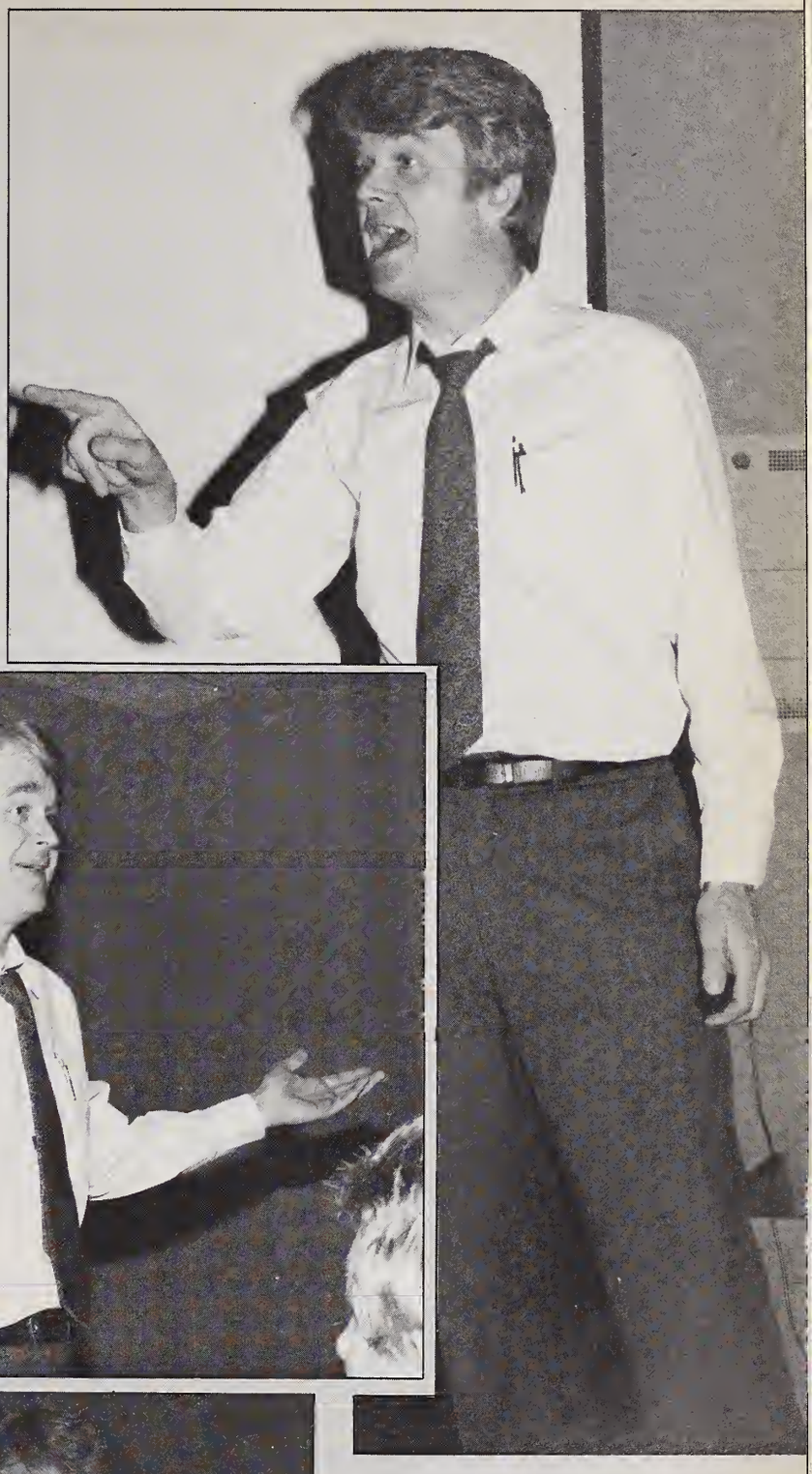
the past 20 years. He listed several choices that seemed to be open to Congress as they tried to approach an obviously delicate problem but were faced with the requirement of doing something to improve or contain the Medicare system. Representative Moore felt the primary choices existed between attempts to use a series of incentive versus dis-incentives introduced by legislation, or a so-called "all payor plan" involving total control of reimbursement and prices through the Medicare system. He did not appear to be enthusiastic that any of these proposals would lead to a profound change but felt it was important that Congress not pass any legislation that would hinder the marketplace from operating in order that Medicare beneficiaries could receive the best service for the best dollar.

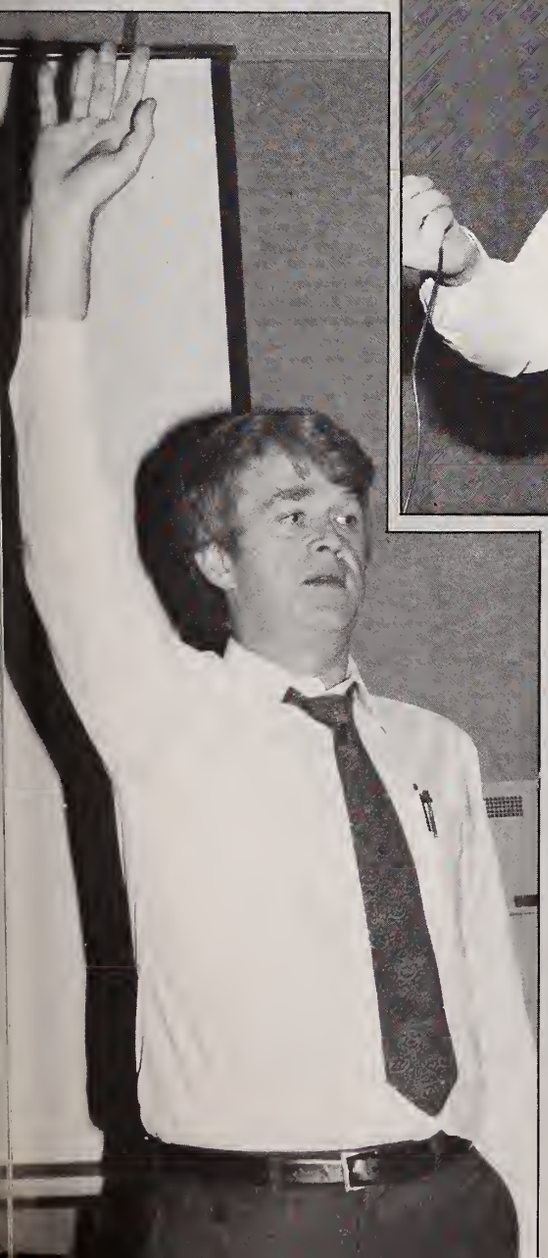
It is of note that the Executive Committee of MAG has endorsed the concept of the Health IRA proposal and urged that it be forwarded to Georgia's congressional representatives for their consideration.

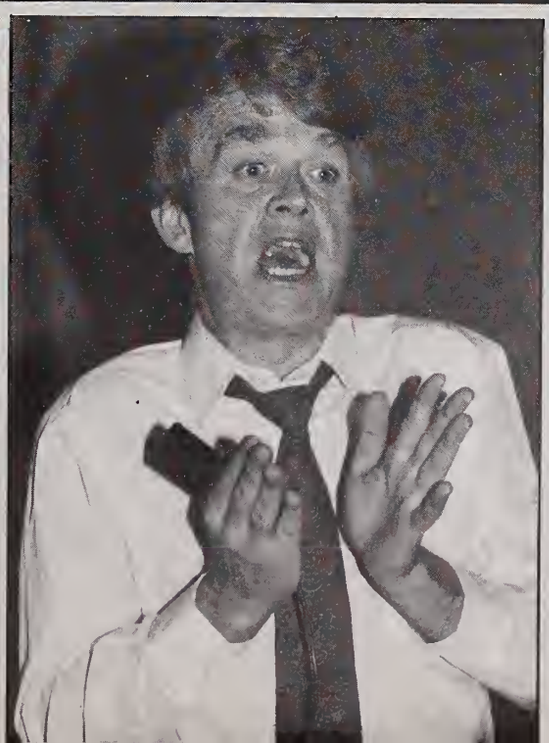
Whereas most of the proposals described throughout the conference were relatively short-term, there was one that seemed to offer a long-range solution that might solve the government's problem with Medicare. Dr. John Goodman, an economist from the University of Dallas, described a concept called "Health IRA" where individuals would be able to utilize a tax credit on an annual basis to fund an IRA that would provide medical care upon their individual retirement. This voluntary program, which would be most attractive for the younger age group, would allow each individual to accumulate funds for medical care that could be dispensed by the individual following his retirement. This would relieve the tremendous cost burden on the federal government in the long term and perhaps even obviate the necessity for various control mechanisms that the government feels is important. In his discussion, Dr. Goodman also presented an analysis of the current Medicare situation which seemed to reinforce Representative Moore's statement that the Medicare system was not working. Dr. Goodman described the various discriminatory aspects of Medicare and how many individuals would never receive any benefits from the system that they had contributed to for their entire working life. Dr. Goodman's proposal was criticized as being a mechanism for increasing the federal deficit, but he responded by pointing out that these funds that were set aside would benefit the banking industry and the fallout would improve the overall economy as well as the fact that the funds would be available if government wished to increase its borrowing from the private sector. (It is of note that the Executive Committee of MAG has endorsed the concept of the Health IRA proposal and urged that it be forwarded to Georgia's congressional representatives for their consideration.)

The most concrete proposals presented at the Leadership Conference came from a combination of Mr. Thomas Hoban, the Executive Vice President of the Hennepin County Medical Society, and from Mr. Gould Hagler of the MAG Administrative Staff in Atlanta. In separate presentations, they discussed the advantages of organized medicine developing a network of physician-controlled groups that would be heavily involved in the delivery of care. In the Twin Cities area of Minnesota, where 40% of the population is enrolled in some form of prepaid health care, there are a number of physician-organized administrative plans that provide relatively strict utilization requirements for hospitalization and that have been able to maintain their existence by competing with local health maintenance organizations for various patient populations. Mr. Hagler presented the framework of a Georgia Physician's Organization (GPO) that would emerge as an alternative delivery system and be available for local physician groups to use as needed in their own locality. The MAG plan was in response to direction given to the MAG staff at a special called meeting of the House of Delegates in October, 1984, where there was considerable discussion about the alternative delivery systems. The details of the GPO are to be presented to the next House of Delegates meeting in April of 1985.









Dr. Andy Morley in action. Dr. Morley, an acclaimed expert in the field of medical marketing, explained on Saturday morning how doctors can more effectively promote their practices. His strong and personable style is reflected in these pictures, taken during his "break-out" session. Dr. Morley is a family physician from Decatur and President of the Georgia Academy of Family Physicians.

In the final talk which seemed to emphasize the importance of understanding the necessity of contracting skills, Mr. Jack Wood, an attorney from Colorado and a former President of the American Society of Hospital Attorneys, described the current trends in our society concerning medical care. He pointed out that we are moving from a scarcity of services to a surplus of services, from retrospective reimbursement to prospective pricing, from informal delivery modes to integrated modes involving contractual care, from a nonprofit behaviour to a for-profit behaviour, and from an administrative capacity to a more heavily oriented management activity. Mr. Wood's experience in dealing with both physicians and with hospitals provided him with a perspective that allowed him to identify these trends, and he emphasized that the consumer seems to be moving to a different form. Consequently, it is important for physicians to provide variations from the previous traditional concepts to the newer concepts of today's environment if they, the physicians, are to maintain their control.

In the decade of the 80s, . . . physicians are dealing with a decreased individual practice population . . . and it is important for them to develop strategic planning for management as well as for marketing. . . .

The only presentation that seemed to depart from exploring alternatives in the delivery system was the discussion by Dr. James Todd, a Trustee of the AMA and the President of the Physicians Insurer's Association of America (a group of physician-owned professional liability insurance companies). Dr. Todd's discussion of the medical liability situation was very thoughtful and quite sobering. He specifically stated that the basis for our malpractice problem was indeed malpractice, and he pointed out that 95% of the payouts from the New Jersey company that he headed was for indefensible actions on the part of physicians. He emphasized that this problem would not disappear and that it was inappropriate for physicians to look elsewhere for salvation from this problem. He did not have an immediate demonstrable solution but described this as being a breakdown in human relations that leads to litigation. He emphasized that the patient expects communication, compassion, and competence from their physicians and that until the physician community improved these aspects of medical care, then these same physicians could expect to continue to have mounting problems with medical liability. He pointed out that physician-owned companies could not resolve this, since it was both a collective and individual problem, and that each individual physician must exercise responsibility within the individual practice setting in order to achieve positive results.

All in all, the Third Annual Leadership Conference provided considerable information to the attendees, information that seemed to direct their attention to who is to be in control of medical care and to some degree more definitive steps about how this control would be exercised. The common theme throughout the presentations centered around the importance of physician involvement in order for physicians to maintain their control in the medical marketplace. Little discussion was given to any alternatives of other segments of our society being in control of the marketplace, except for notations that any other controls would be to the detriment of the physicians. It was readily apparent that the status quo of medical care delivery is no longer acceptable and that major revisions are not only necessary but also imperative. It would certainly appear to be beneficial for physicians to continue to have Leadership Conferences that would explore constructive alternative solutions to our immediate problems.

W. Dan Jordan, M.D.
Surgeon, Atlanta

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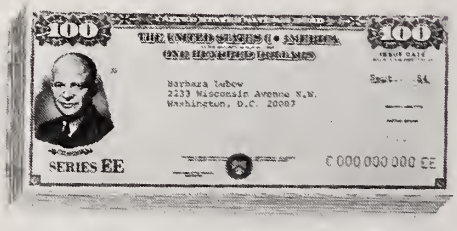


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Hypertrophic Cardiomyopathy in Childhood: Part II

RAND MALONE, M.D., WESLEY COVITZ, M.D., and E. J. LOVETT, M.D., *Augusta**

ESTABLISHING THE DIAGNOSIS of hypertrophic cardiomyopathy (HCM) in a child has profound implications for the patient and for other family members who may be affected. In three studies encompassing 600 patients, the overall death rate from this disease ranged from 17-24%.[1-3] More than half of the patients who died, did so quite suddenly. The cause of sudden death has never been elucidated. Most agree that the terminal event is probably ventricular arrhythmia. The typical patient who dies suddenly is young, asymptomatic, and is either sedentary or mildly active.[4]

Research efforts have been focused on identifying factors that predict the course of the disease or the risk of sudden death. Maron[4] reviewed the circumstances surrounding the sudden death of 78 patients with HCM and found no clinical, hemodynamic, or morphologic measurement that helped identify those at increased risk for sudden death. Specifically, he found no correlation between "a particular cardiac symptom, magnitude of left ventricular outflow gradient, left ventricular end-diastolic pressure, electrocardiographic pattern or degree of interventricular septal thickening" and sudden death. It is of note, however, that 71% of his patients died before age 30, and more than half were 19 years old or less.

Risk of Sudden Death

McKenna et al.[5] found that the annual mortality rate for children less than 15 years of age was twice that of adults (5.9% vs. 2.6%). A family history of sudden death was a poor prognostic sign. In the 15-45 year age group, the annual mortality was 2.5%. In this category, syncope was predictive of sudden death. In patients 45-60 years old, dyspnea and exertional chest pain were more closely associated with sudden death. The annual mortality rate was 2.6%. Thus, early onset of the disease, a family history of sudden death, syncope, and progression of symptoms were indicative of a poor prognosis.

A recent study[6] of infants with HCM less than 2 years of age revealed that those who were asymptomatic when diagnosed tended to remain so. Findings in these infants were similar to those in adults, except that right ventricular outflow obstruction was documented in 25%. Follow-up in this study was for an average of 6 years.

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Articles for this Page are sponsored and approved by the American Heart Association, Georgia Affiliate. Those wishing to contribute papers to this Page are invited to send them to Dr. Laurence O. Watkins, "Heart Page" Editor, Section of Cardiology, Dept. of Medicine, MCG, Augusta, GA 30909.

A particularly malignant form of HCM associated with sudden death may be concentrated in high risk families.[7] Apart from such a family history, the single, most important prognostic indicator of sudden death is serious arrhythmia.[8]

It has long been appreciated that HCM is associated with ventricular and atrial arrhythmias. Recently, however, prospective studies have clarified the relationship of sudden death to the prevalence of particular arrhythmias and the incidence or rate of development of new arrhythmias in patients with HCM. Maron et al.[9] studied 84 HCM patients with 24-hour Holter monitoring and then followed them for 3 years. Of the 17 patients who manifested ventricular tachycardia (VT), 24% died suddenly or had a cardiac arrest, while only 3% of the 66 without VT died during the same period. McKenna et al.[8] used 72-hour Holter monitoring to study 86 HCM patients. They found that over a period of 2.6 years, 21% with repetitive ventricular premature contractions died, compared with 3% of those who died without this arrhythmia. The mortality of patients with ventricular arrhythmias in HCM is seven or eight times greater than for those without. What is even more disturbing is the rate at which patients with HCM develop ventricular arrhythmias over time. M. J. Frank and associates[10] recently reported the results of a study of 50 patients followed for a mean of 5.9 years with annual ambulatory electrocardiographic monitoring. They found that the rate of development of new ventricular couplets or VT was 18% in 5 years and 40% in 10 years. The incidence of new onset of all categories of potentially lethal arrhythmias (which included sick sinus syndrome and His-ventricular disease as well as ventricular arrhythmias) was 32% in 5 years and 81% in 10 years.[10] Atrial arrhythmias, especially atrial fibrillation, are of concern because of the already compromised ventricular filling that occurs in HCM. It is evident from these findings that sudden death is closely associated with ventricular arrhythmias, and that the development of these disturbances is very likely in patients with HCM.

Treatment

The treatment of patients with HCM has centered around relieving cardiac symptoms and preventing sudden death. In the past, propranolol has been the mainstay of therapy, because it reduces left ventricular outflow gradients by decreasing the heart rate and myocardial contractility, relieves angina pectoris through diminution of myocardial oxygen requirements, and has antiarrhythmic properties. Recently, however, propranolol has been used less frequently as reports of other more effective treatments have been published. McKenna and associates[11] assessed the occurrence of ventricular arrhythmias through 48-hour Holter monitoring of HCM patients, both treated and untreated with propranolol (mean dose 280 mg/day). The frequency of ventricular arrhythmias was almost identical with or without beta-blockers. Recent prospective studies in Britain evaluated the effect of Amiodarone on VT unresponsive to propranolol and/or mexiletine, and chronic atrial fibrillation unresponsive to beta-blockade and digoxin. Amiodarone was found to be highly effective in abolishing these arrhythmias.[12] However, Amiodarone is associated with a significant number of side effects such as photosensitivity,

sleep disturbances, and corneal deposits.[12] Amiodarone is currently an investigational drug in the United States.

These studies reveal that the arrhythmias associated with HCM developed frequently, are varied in nature, and are often difficult to treat with standard therapy. Therefore, besides frequent Holter monitoring to establish the development of arrhythmias, it is important to use Holter monitoring to determine if a particular drug therapy is actually effective in controlling the arrhythmia present.

The other cornerstone of therapy involves the control of symptoms which may be associated with left ventricular outflow gradients. Propranolol has been used almost exclusively to relieve symptoms and improve exercise capacity in HCM patients. It has been reasonably successful, especially in the high dose regimen used by Frank and associates,[13-15] but verapamil may be even more beneficial. In adults, verapamil has been found to reduce left ventricular outflow gradients,[16-19] increase exercise capacity,[20-21] relieve symptoms,[16, 20, 21] decrease ventricular septal thickness,[22] and decrease left ventricular mass[16] with few side effects.[20, 21] One study[23] in children showed similar results and demonstrated that verapamil was beneficial in symptomatic patients who were not responsive to propranolol.

Epstein and Rosing[24] have followed 120 patients treated with verapamil for 3 years. They detected very few overall adverse reactions, but some serious and sometimes fatal side effects did occur. They stated that verapamil can cause excessive vasodilatation, sinus node arrest, and atrioventricular block, all of which can cause hypotension and decrease coronary perfusion pressure. These effects were rare but often fatal and tended to occur more commonly with concomitant use of quinidine. In view of the incidence of conduction system disorders demonstrated by Frank et al.,[10] the use of verapamil may enhance risk in some patients.

Sudden death is closely associated with ventricular arrhythmias, and the development of these disturbances is very likely in patients with HCM.

Nifedipine is another calcium antagonist that has occasionally been tried in treatment. Its effects are similar to those of verapamil, except that its heightened vasodilating action may actually increase left ventricular outflow gradients, leading to syncope and worsening of symptoms.[25] Diltiazem, a newer calcium blocker with less of a vasodilating effect than nifedipine, has been shown to decrease left ventricular outflow gradients and may be used more often in the future.[26]

The final verdict on the efficacy of propranolol versus calcium antagonists has not been rendered. Both seem to relieve symptoms associated with left ventricular outflow gradients; however, verapamil may have the potential to alter the course of HCM by decreasing ventricular septal thickness and left ventricular muscle mass.[16, 22] Verapamil also is without the common side effects of propranolol that often lead to poor compliance. Otherwise, therapy aimed at decreasing symptoms involves avoidance of factors that lead to an increase in left ventricular outflow gradient. These include: excessive diuretics, preload and afterload reducers, beta-agonist drugs, digitalis glycosides, strenuous exercise, and the Valsalva maneuver.

Conclusion

The risk of sudden death for children with HCM under the age of 15 years is twice that of adults. A family history of sudden death is a poor prognostic sign in this age group. Whereas syncope and progressive symptoms are worrisome signs in

older patients, children are usually asymptomatic. In one large series, half of the patients who died were less than 19 years of age. In most instances, the heart disease was previously unrecognized. HCM accounts for a significant number of sports-related deaths.[27]

Ventricular arrhythmia has been established as a frequent cause of death in this population. The mortality in patients with HCM who have ventricular arrhythmia is 7-8 times as great as in those without arrhythmia. In a long-term follow-up study, 81% of HCM patients developed new, potentially fatal arrhythmias.

Propranolol has been the mainstay of treatment for prevention of arrhythmia and reduction of symptoms related to an outflow gradient for many years.

In children with HCM who were unresponsive to propranolol, verapamil has been shown to relieve symptoms and improve exercise capacity and has the additional benefit of reducing septal thickness and ventricular mass with few side effects. Long-term follow-up studies reveal that propranolol does not prevent the development of new, potentially lethal arrhythmias. Management of arrhythmia, therefore, requires constant surveillance and antiarrhythmic therapy specific for the abnormality detected.

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Liability Under the Doctrine of Negligence *per se*

ROBERT N. BERG, *Atlanta**

THE DOCTRINE OF "negligence *per se*" essentially provides that a standard of conduct set out in a statute may be adopted by the courts as a legal standard of conduct, so that a showing of a violation of the statute, standing alone, is sufficient to establish negligence, as a matter of law.[1] The judicial determination of whether or not a violation of a statute is negligence *per se* involves analyzing the nature of the violation in order to determine: (1) whether the injured person falls within the class of persons intended to be protected by the statute, and (2) whether the harm complained of was the harm intended to be guarded against by the statute.[2]

This case . . . suggests that physicians and hospitals may be faced with a new line of attack in defending against malpractice claims.

A case recently decided by the Georgia Court of Appeals evidences the difficulties involved in attempting to apply the doctrine of negligence *per se* to health care providers. This case also suggests that physicians and hospitals may be faced with a new line of attack in defending against malpractice claims.

Liability Under the Doctrine of Negligence *per se*

In *Central Anesthesia Associates P.C. v. Worthy,*[3] a patient gave birth to a child at a hospital and, on the following day, underwent tubal ligation surgery. The surgery was conducted by an obstetrician/gynecologist, assisted by an intern employed by the hospital. Anesthesia services for the operation were provided by a professional corporation (the "P.C.") consisting of eight anesthesiologists, who by contract provided and/or supervised all anesthesiology services performed at the hospital. The anesthesia was administered to the patient by a registered professional nurse who was also a student nurse anesthetist enrolled in the hospital's school of anesthesia for nurses training to become "certified registered nurse anesthetists" (CRNAs). The nurse was supervised by a physician's assistant specializing in anesthesiology and employed by the P.C.

As a result of allegedly improper anesthesia services, the patient went into cardiac arrest and suffered severe brain damage. Subsequently, a suit was brought by the patient's husband against the hospital, the P.C., certain individual members of the P.C., the physician's assistant, the nurse, the Ob/Gyn, and the intern. In part,

* Prepared at the request of the Medical Association of Georgia. Mr. Berg is a partner in the firm of Powell, Goldstein, Frazer & Murphy, General Counsel to the Association, 1100 C & S National Bank Building, Atlanta, Georgia 30335.

the suit involved typical malpractice allegations against the defendants. In addition, however, the plaintiff claimed that *all of the defendants* were guilty of negligence *per se,* in that they all failed to comply with certain statutory provisions relating to the use of CRNAs.

The statutory duty allegedly breached in the *Worthy* case was found in O.C.G.A. §43-26-9, which generally defines and establishes the minimum qualifications for CRNAs (the "CRNA Statute"). In addition, the CRNA Statute provides:

> *In any case where it is lawful for a duly licensed physician practicing medicine under the laws of this State to administer anesthesia, such anesthesia may also lawfully be administered by a certified registered nurse anesthetist, provided that such anesthesia is administered under the direction and responsibility of a duly licensed physician with training and experience in anesthesia.*

(Emphasis supplied.)

In the *Worthy* case, the plaintiff contended that the defendants each failed to comply with the provisions of the CRNA Statute (because the anesthesiology services rendered to the patient were not rendered with the appropriate degree of supervision). Thus, according to the plaintiff, *each* of the defendants was negligent *per se* and liable for all damages incurred by the plaintiff. The trial court essentially agreed, granting summary judgment to the plaintiff against all but one of the defendants (the intern) on the negligence *per se* issue (the Court reserved decision on the damages issue).

On appeal, the Georgia Court of Appeals first found that the statutory duty imposed under the CRNA Statute was one which, if breached, was capable of producing injury to an anesthetized person. In addition, the Court found that the purpose of the CRNA Statute was to protect patients from the dangers of improperly administered anesthesia by those unqualified by a lack of what public policy regards as minimum education in the field, and by a lack of specified supervision.[4] Thus, the Court held that the failure to comply with the CRNA Statute by a person having a duty to comply, if established by the plaintiff, constituted negligence *per se*.

The Court was then faced with a question of who, among the defendants, had a duty imposed by the CRNA Statute. The Court concluded that:

1. The defendant nurse had a duty not to practice medicine beyond what the law allowed. According to the Court, the breach of this duty also constituted a breach of the duties imposed under the CRNA Statute. Thus, the nurse was found to be negligent *per se*.

2. Similarly, the physician's assistant had a duty not to undertake and supervise the performance of the nurse, since he was not authorized to do so under the CRNA Statute. Accordingly, the physician's assistant also was found to be negligent *per se*.

3. The P.C. had a duty under the CRNA Statute not to assign students to administer anesthesia and not to assign a nonphysician to supervise her. This duty applied not only to the P.C., but also to three of the individual physician P.C.

members who, according to the Court, each was in a position of responsibility with respect to the performance of the anesthesiology services by the P.C.'s employees on the patient. Thus, the Court found both the P.C. and the individual P.C. members to be guilty of negligence *per se*.

4. The hospital had a duty not to permit violations of the CRNA Statute because it provided, among other things, the physical resources necessary for such activity to take place. In essence, the hospital's duty to ensure that an adequate, competent medical staff served the patients within the hospital was found by the Court to extend to the situation where independent contractors, performing services in the hospital, did so in violation of the CRNA Statute. Thus, the Court found the hospital to be negligent *per se*.

5. Finally, the Court recognized that the Ob/Gyn might be found to have a duty under the CRNA Statute to see that those who assist him in surgery and provide services to his patients meet the minimum qualifications of the law. However, on the basis of the factual record before it, the Court was unprepared to say, as a matter of law, that the Ob/Gyn had a duty to inquire or satisfy himself that the anesthetist was an anesthesiologist or a CRNA and that the Ob/Gyn had breached this duty and was negligent *per se*. Thus, the Court reversed the trial court and held that the question of the Ob/Gyn's duty was one for the jury and should not have been decided on a motion for summary judgment.[5]

Conclusion

The Court's decision in the *Worthy* case raises (and does not answer) several interesting legal questions, such as the extent to which a surgeon, as the "captain of the ship," is responsible for assuring that the members of his surgical team are minimally qualified. Perhaps the most intriguing issue raised by the Court, however, involves the extent to which hospitals may be found liable for the acts of independent contractors occurring in their facilities: Under established legal principles, a hospital will be primarily liable for the negligence of physicians who are *employed* by it, but will not be liable for the negligence of physicians serving as independent contractors. In that regard, the test of whether a physician is an employee or an independent contractor will depend upon the degree of control exerted by the hospital — if the hospital does not have the ability to control the manner and method of services provided by the physician, the hospital normally will not be found to be the employer of the physician and hence will not be primarily liable for the physician's negligence.

The Court's decision . . . raises (and does not answer) several interesting legal questions, such as the extent to which a surgeon . . . is responsible for assuring that the members of his surgical team are minimally qualified.

As set out by the Court in the *Worthy* case, however, a hospital may be liable for the negligent acts of physicians, even if those physicians are independent contractors, if those acts involve a breach of a statutory duty, such as the duty to supervise CRNAs. Thus, the hospital faces a dilemma: In order to prevent liability under the doctrine of negligence *per se,* the hospital must supervise, to some degree, the activities of its physicians. Too much supervision, however, may allow a court to find the physicians to be employees of the hospital, such that the hospital will be primarily liable for the physicians' negligence. Alternatively, too little supervision by the hospital of the activities of its physicians, while perhaps strengthening its contention that the physicians are independent contractors (and thereby allowing

the hospital to avoid liability for the negligent acts of the physicians), may increase the likelihood of the hospital incurring liability for allowing the physicians to act in contravention of some statutory duty.

[*Decisions rendered by the Georgia Court of Appeals are subject to appeal to the Supreme Court of Georgia, which has the power either to affirm or to reverse the decision of the Georgia Court of Appeals, in whole or in part, with or without comment. Accordingly, it is possible that the opinion discussed in this article, although representing the current state of the law in Georgia, may be substantially altered or modified by the Supreme Court. In the event that the case discussed in this article is appealed and subsequently reversed by the Georgia Supreme Court, we will inform you of that decision, once it is reached, in a subsequent issue of the* Journal.]

Notes

1. *See, e.g., Louisville & Nashville RR v. Hames,* 135 Ga. 67 (1910).
2. *See, e.g., Potts Fruit & Produce Company, Inc.,* 165 Ga. App. 546, 547 (1983).
3. ____ Ga. App. ____ (December 5, 1984).
4. *Central Anesthesia Associates P.C. v. Worthy,* supra, ____ Ga. App. at ____.
5. *Id.*

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Colorectal Health Check (CHECK)

JOHN PAGE WILSON, M.D., *Atlanta**

EARLY DETECTION PROGRAMS in colorectal cancer are not new to the American Cancer Society (ACS) or to Georgia physicians. They have always been a part of the cancer detection program of the American Cancer Society. For several years in Georgia, there has been a special effort directed towards this most common of all highly treatable cancers. Arch Avery has devoted much work in this effort to popularize the need for proctosigmoidoscopy and cancer detection in general.

Re-evaluation of current popular concepts and health practices as ascertained by a recent ACS commissioned study on "Cancer of the Colon and Rectum: The Public Perspective," as well as current diagnostic and treatment statistics and trends in management have demonstrated a clear need for a renewed emphasis on early detection of colorectal cancer.

CHECK emphasizes three diagnostic procedures: digital rectal examination, stool blood test, and proctosigmoidoscopy for asymptomatic patients.

At its annual meeting in November, 1983, the ACS launched a concentrated 3-year program known as Colorectal Health Check (CHECK) to improve results in the management of colorectal cancer. As in all of its early detection programs (such as that which was so successful with the Pap Smear for cervical cancer), the effort is directed toward public information, public education, and professional education.

In the area of public information, the goal of CHECK is to increase the public's awareness of colorectal cancer and to inform the public of early detection and preventive methods. The plan for public education is to increase the percentage of adults aged 50 and over reached annually with education programs on colorectal cancer.

The goal in professional education is to reach each family practitioner and other primary care physicians in Georgia with a continuing medical education program on the physician's role in the early detection of colorectal cancer.

Colorectal Health Check emphasizes three diagnostic procedures: 1) a digital rectal examination, 2) stool blood test, and 3) proctosigmoidoscopy for *asymptomatic* patients (the symptomatic patient demands definitive studies).

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Reprinted at the request of the Georgia Division, American Cancer Society, from the February, 1984, issue of the *Journal of the MAG*. Others wishing to contribute papers to this Page are invited to send them to T. Gray Fountain, M.D., 910 North Jefferson, Albany, GA 31708.

1. Digital rectal examination: Recommendation: This should be done annually on all patients over 40 years of age or high risk (significant family history for colorectal cancer, personal history of colon polyps or cancer, or chronic ulcerative colitis). Data indicate that less than 50% of patients who have annual health exams have digital rectal exams as part of this process, and a much smaller percentage of the population at large have not had this simple elementary and fundamental health examination.

2. Stool blood test: Recommendation: This should be done annually on all patients over 50 years of age. Although this must be done with preparation and an understanding of exactly what its value and accuracy is, the test is still a very effective screening procedure done in conjunction with the total program advocated. In particular, properly done it has not resulted in an inordinate number of definitive tests resulting from false-positive blood stool. There also are data to indicate that the false-negative rate also is acceptable and quite low when done properly.

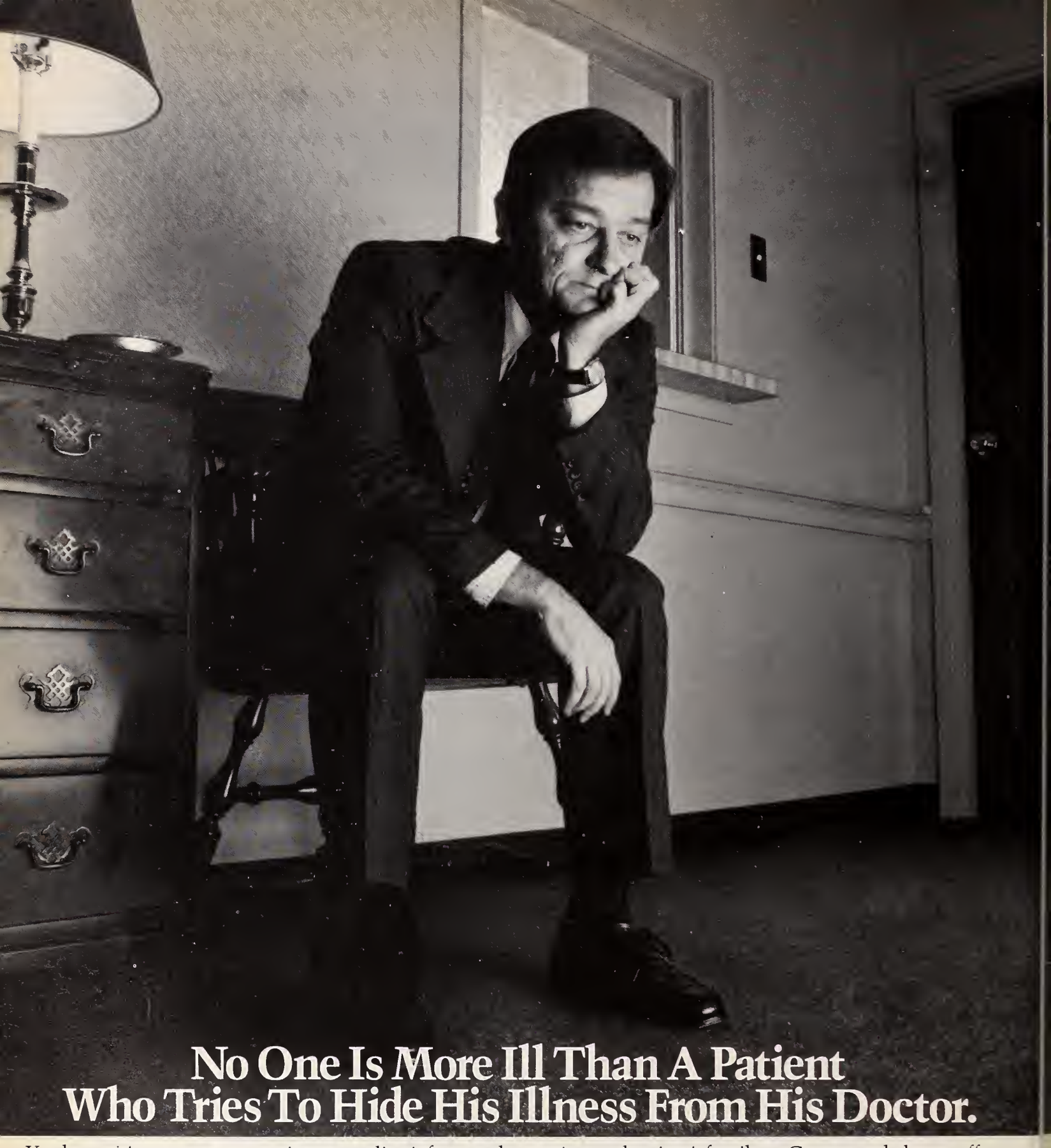
3. Proctosigmoidoscopy: Recommendation: This is recommended for patients over 50 years of age on an annual basis for 2 years and then, if negative, every 3 to 5 years. The implementation of routine sigmoidoscopy has been quite difficult over the past 2 to 3 decades of its advocacy because of the lack of acceptance on the part of both the patient and physician. Some of the objections can be overcome and a more effective examination be carried out with the 35 mm. flexible sigmoidoscope. In conjunction with the American Society of Gastrointestinal Endoscopy, the American Cancer Society is promoting physician education in the use of this instrument. The statistical change that has occurred in the location of colorectal cancers in the recent years has increased the need for this more effective examination as an alternative to the rigid endoscope. The latter, however, is obviously better than no examination.

It is clear that improvement can be made in early diagnosis and treatment of colorectal cancer, but this can only be done with a cooperative and knowledgeable public and profession.

It is clear that improvement can be made in early diagnosis and treatment of colorectal cancer, but this can only be done with a cooperative and knowledgeable public and profession. It is also clear that previous approaches must be altered to accommodate changing statistics in location, surgical proficiency, adjuvant radiation therapy, and a much more knowledgeable and acquiescent public.

It is hoped and anticipated that there will be an increasing public request for an appropriate diagnostic program in this area and it is expected that the request will be met appropriately and the program promulgated by the medical profession.

Program material, brochures, and information can be obtained from the local unit or the Georgia Division office of the American Cancer Society.



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Heart Ball Set for March

The 4th annual Heart Ball is fast approaching. March 30, 1985, is the date for the glamorous ball, a benefit for the Fulton County Unit of the American Heart Association. The Ritz-Carlton Buckhead will host the affair and Peter Duchin and his orchestra will perform for the black-tie audience. Dr. J. Willis Hurst, Professor and Chairman of Medicine at Emory University School of Medicine, will be honored this year as the Ball's 1985 Honorary Chairman. Door prizes include crystal, furs, goose hunting sojourns, cruises, boating trips, beach vacations, Frabel sculptures, trips to Mexico, jewelry, and airline trips.

Medicare Offers HMO Option

A new prospective payment option for Medicare HMO enrollees, scheduled to take effect February 1, is expected to encourage up to 800,000 Medicare beneficiaries to join HMOs or other competitive medical plans within the next 3 or 4 years.

Substantial changes have been made in the rules since they were first proposed last May. The most significant is a requirement that Peer Review Organizations review the care of Medicare HMO enrollees.

The new rules give HMOs, preferred provider organizations, and other alternative delivery plans two payment options. The plan may either continue under the cost-based arrangements nearly all HMOs operate under today. Or it may be paid a prospective monthly fee for each of its Medicare beneficiaries.

Under the prospective payment, HMOs would receive up to 95% of Medicare's average cost per beneficiary in the community for each Medicare HMO enrollee. Adjustments would be made for age, sex, and institutional status of the Medicare enrollees.

The HMOs or other prospectively-paid plans must provide benefits at least equal to those of Medicare. If the plan's cost of providing care to Medicare recipients is less than 95% of Medicare's so-called average adjusted per capita cost, the HMO must accept a lower payment or provide more benefits to Medicare enrollees. Plans may charge a premium to cover the costs of extra services and premiums are expected to range from $20 to $50.

Beneficiaries would still be liable for the monthly Part B premium and could also still be held responsible for cost-sharing equal to the current liability in the standard Medicare plan. Based on the experience of HMOs participating in a demonstration of a similar Medicare financing arrangement, many of the plans are expected to reduce or eliminate current cost-sharing, however.

Medicare "Participation" at 30%; Accepted Claims Rise

About 30% of physicians treating Medicare patients signed "participating agreements" with the program in fiscal 1984. At the same time, the number of claims for which physicians accepted Medicare fee allowances as full payment rose to a record 66.5% in November of last year.

The physician sign-up rates varied by state and by specialty, ranging from 5.6% in South Dakota to 53.9% in Alabama, and from 18.2% for some miscellaneous surgical specialties to 50.8% for nephrologists.

The "participating" concept was established in legislation enacted last fall and now under challenge in federal courts by the American Medical Association, the Indiana Medical Society, and some individual physicians. The law froze Medicare fees for all physicians until October, 1985, and provided financial and administrative incentives for practitioners who agreed to "participate." Participating physicians must accept assignment on all medical claims, billing the patient only for the 20% of the Medicare allowable fee that is not paid by the program.

In fiscal 1984, about 56% of Medicare claims were taken on assignment and about 20% of physicians reportedly always assigned claims, according to HCFA. In fiscal 1985, some 118,428 physicians, or 29.8% of those treating Medicare patients, signed participating agreements. Assignment rates, which had been rising slowly since 1976, jumped to 66.5% of all claims, or 5% higher than their previous high of 61.5% in 1969, HCFA says.

In addition to physicians, some 19,751 or 34% of non-physician practitioners treating Medicare patients and 17,822 or 23.8% of Medicare suppliers signed agreements.

Anti-Abortion Bills Sent to Congress

The first of a series of anti-abortion bills was introduced in the Senate's opening days in January.

The bill, called the "Unborn Children's Civil Rights Act of 1985" (S. 46), was introduced by Sen. Jesse Helms (R-NC) and Gordon Humphrey (R-NH) and endorsed by a coalition of anti-abortion groups.

The proposed legislation states that:

★ scientific evidence demonstrates that abortion takes the life of an unborn child who is a human being,

★ the right to an abortion is not secured by the Constitution, and

★ the Supreme Court, in its Roe v. Wade decision, erred in not recognizing the humanity of the unborn child.

It also denies federal funding for abortion and fetal research, except to save the lives of the mother or child.

New Cesarean Guidelines Issued

The American College of Obstetricians and Gynecologists (ACOG) has issued new guidelines that encourage women who have had a previous cesarean birth to deliver their next child vaginally.

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NEW MEMBERS

Allen, Jennifer H., Bibb—ACT (N-1)—D
800 First St., Ste. 300, Macon 31201

Anderson, Amos M., III, Bibb—ACT—U
718 First St., Macon 31201

Barmore, Burton B., III, McDuffie—ACT—FP
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34 Medical Arts Center, Savannah 31405

Carr, John S., DeKalb—I&R—IM
2519 Pineview Dr., Decatur, 30030

Chong, James, Mitchell—ACT—OBG
34 Ellis St., Camilla 31730

Collipp, Platon J., Wayne—ACT—PD/END
176 Memorial Dr., Jesup 31545

Conner, William H., Floyd-Polk-Chattooga—ACT—GE
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1105 Palmyra Rd., Albany 31701

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Davis, Frank E., Newton-Rockdale—ACT (N-2)—GS
4122 Tate Street, Covington 30209

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Dept. of Family Medicine, Room 304, Medical College of Georgia, Augusta 30912

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Piacente, David A., Muscogee—ACT (N-2)—DR
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Powell, Jack H., Coweta—ACT (N-2)—ORS
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Williams, Lawrence H., Muscogee—ACT (N-2)—IM
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Woodall, Lee T., Bibb—ACT (N-2)—FP
408 Thomaston St., P. O. Box 408, Barnesville 30204

PERSONALS

First District

Savannah physician, **Ronald Fagin, M.D.,** was elected chief of staff for 1985 by the medical staff at Memorial Medical Center. Chosen as staff-elect was **C. Walker Beeson, III, M.D. William Degenhart, M.D.,** was elected secretary-treasurer.

Fifth District

George W. Brumbley, M.D., Medical Director of Henrietta Egleston Hospital for Children, recently received the Duke University Distinguished Alumnus Award in recognition of excellence in academic and administrative medicine. The honor was presented at the Duke Medical Alumni Awards Banquet in November, 1984.

Wadley Raoul Glenn, M.D.,who has served as medical director of Crawford W. Long Memorial Hospital of Emory University since 1946, has been honored by having the operating room suite named the Wadley R. Glenn Operating Pavillion. The Executive Committee of the Board of Trustees of Emory University voted unanimously for the new name. The pavilion contains nine operating rooms and two rooms for cystoscopy, with plans for an additional four major operating rooms. The growth of Crawford W. Long and its role within the Emory structure was shaped and strengthened by Dr. Glenn at virtually every point, says John Henry, Administrator of Crawford W. Long.

SOCIETIES

At the annual meeting of the **Georgia Medical Society** held on December 11, 1984, the following officers were installed for 1985: President, J. Patrick Evans, M.D.; Vice President, Don A. Wright, M.D.; President-elect, J. Moultrie Lee, M.D.; Secretary, Lawrence E. Ruf, M.D.; Treasurer, Roland S. Summers, M.D.; Historian, A. Preston Russell, M.D.; and Parliamentarian, Dan H. Willoughby, M.D.

DEATHS

Daniel H. G. Glover

Daniel H. G. Glover, M.D., a retired Augusta physician, died January 14, 1984. Dr. Glover was a native of Troup County and had lived in Augusta since 1966. He was in private practice in South Carolina and public health and private practice in Wayne County. He moved to Augusta in 1966 as a state public health doctor and practiced at the Medical College of Georgia. He was a veteran of World War II.

Survivors include his wife, one son, one daughter, his father and mother, and two sisters.

S. B. Traylor

S. B. Traylor, M.D., 80, who practiced in Barnesville for nearly 55 years, died January 15. Dr. Traylor attended the University of Alabama and graduated from Emory University Medical School.

Dr. Traylor is survived by his wife, one daughter, one son, and several grandchildren.

Physician's Recognition Award Recipients

LISTED BELOW *are those physicians in Georgia who have earned the AMA's Physician's Recognition Award (PRA) from October through December, 1984.*

The Award was established in 1969 "to recognize, encourage, and support physicians who participate regularly in continuing medical education and to emphasize the importance of developing more meaningful continuing medical education opportunities for physicians." A minimum of 150 credit hours of CME must be earned over a 3-year period to qualify for the Award. The hours may include such activities as conferences, residencies, teaching, writing, private reading, listening to cassettes, home study courses, consultation, and peer review; at least 60 of the hours, however, must be from formal CME programs sponsored or co-sponsored for Category I credit by organizations accredited for these activities.

The MAG House of Delegates has set a goal that all MAG members shall have received the PRA by 1985. We congratulate the following physicians who have distinguished themselves and their profession by their commitment to continuing education:

Emile G. Abbott, Conyers
Arjandas L. Ahuja, Savannah
Jonathan P. Alspaugh, Atlanta
Ivan Arnold Backerman, East Point
Philip B. Bailey, Dalton
C. Markham Berry, Atlanta
Douglas R. Bess, Atlanta
Jay C. Bisgard, Robins AFB
Samuel Blank, Atlanta
Clorinda S. Bohler, Augusta
Stephen Boyle, Conyers
Steven C. Brena, Decatur
Betty Ann Brooks, Decatur
Rodney M. Browne, Macon
Barbara S. Bruner, Atlanta
Gloria Campbell-D'Hue, College Park
Richard Carlin, Snellville
Henry B. Carroll, Columbus
Eric G. Catz, Martinez
Harrison D. Cavanagh, Atlanta
John Cavendo, Atlanta
Miriam W. Chambless, Hamilton
Sy-Ru Chiang, Tifton
Bashir A. Chaudhary, Augusta
Sun Ik Choi, LaGrange
Soong P. Chung, Dublin
Cyrus M. Cioffi, Atlanta
Paul V. Conescu, Decatur
Frank J. Cook, Atlanta
Laurence T. Crimmins, Albany
Thomas J. Croft, East Point
John M. Crymes, Athens
William A. Darden, Savannah
William R. Deal, Statesboro
Michael G. Deeken, Augusta
Elizabeth D. DeGive, Conyers
James R. DeGive, Conyers
Ervin D. DeLoach, Savannah
Bruno Denis, Hapeville
Evelio F. Diaz, Milledgeville
Dennis D. Doblar, Martinez
David P. Drotman, Atlanta
Bruce Lee Eames, Atlanta
John R. Edmiston, Alma
Dean C. Elliott, Augusta
Dan B. Elrod, Hazlehurst
Andres R. Fernandez, Riverdale
Marion L. Ferrell, Sparta
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Carl E. Flinn, Decatur
Robert E. Fokes, Moultrie
William C. Ford, Lavonia
Paul D. Forney, Augusta
John A. Frank, Atlanta
David J. Frolich, Macon
Varon A. Garcias, Riverdale
Robert L. Garnett, Columbus
Fletcher O. Garrison, Cornelia
Christine P. Glavey, Atlanta
Ridley M. Glover, Dublin
Pilar Goicoechea, Hardwick
Aaron S. Goldberg, Columbus
Stephen R. Goldman, Atlanta
Ketty Gonzalez-Ruiz, Dunwoody
Raul A. Gonzalez, Valdosta
William L. Graham, Columbus
Vernon J. Grantham, Fort Valley
Herbert S. Greenwald, Macon
Ross F. Grumet, Atlanta
Margarita L. Guzman-Ferry, Dahlonega
Mortimer Hacker, Atlanta
Mary Ann T. Hagler, Augusta
Pamela E. Pearson Hall, LaGrange
Robert Preston B. Hayes, Columbus
Fernando O. G. Hernandez, Warner Robins
Louis J. Herskowitz, Dunwoody
James E. Hinkle, Atlanta
Raymond C. Ho, Americus
R. James Hooper, Macon
William S. Howland, Atlanta
Stephen C. Hunter, Columbus
Charles T. Ingram, Decatur
Richard L. Ingram, LaGrange
George A. Jack, Atlanta
Diane Jahoda, Athens
Peter S. Jensen, Fort Gordon
Salley S. Jessee, Atlanta
Thomas D. Johnson, Albany
J. Sherwood Jones, Dalton
Randy L. Judd, Atlanta
Henry J. Kaplan, Atlanta
Ellis B. Keener, Gainesville
James G. Killebrew, LaGrange
Renate D. Kimbrough, Atlanta
Garland E. Kinard, Rossville
William K. Kinlaw, Decatur
Paul A. Kirschbaum, Atlanta
Robert Lee Kushner, Atlanta
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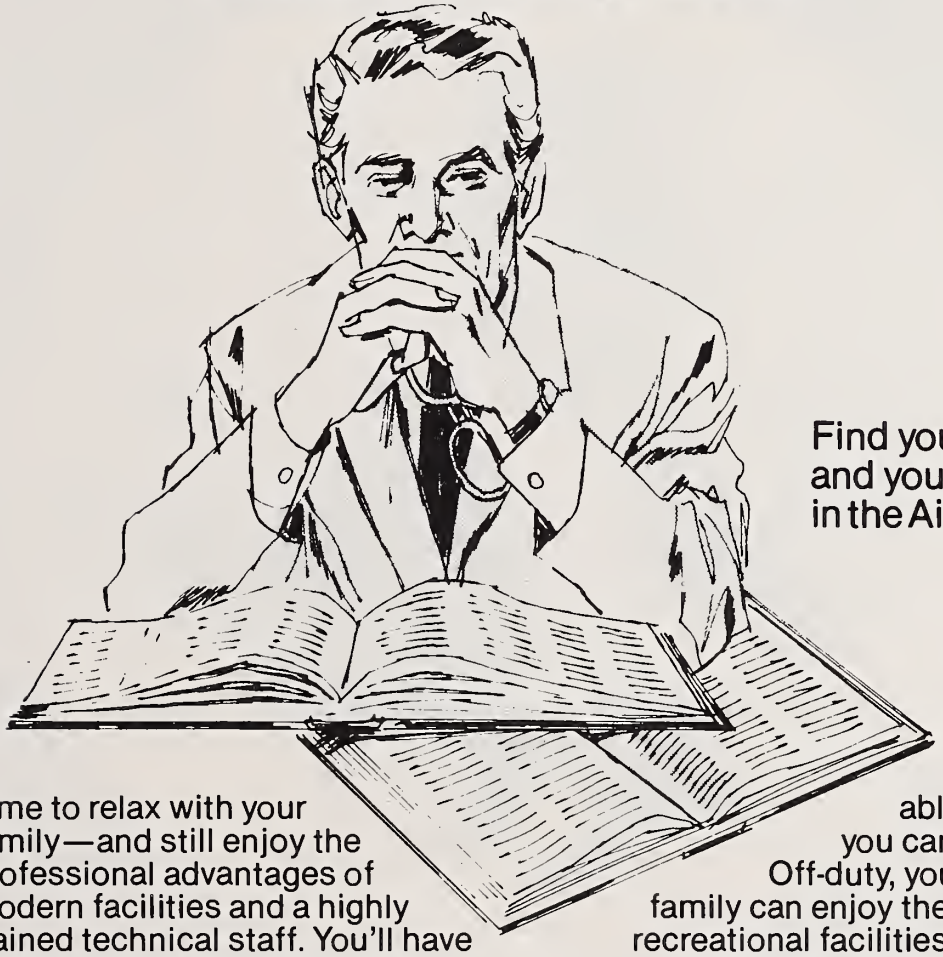
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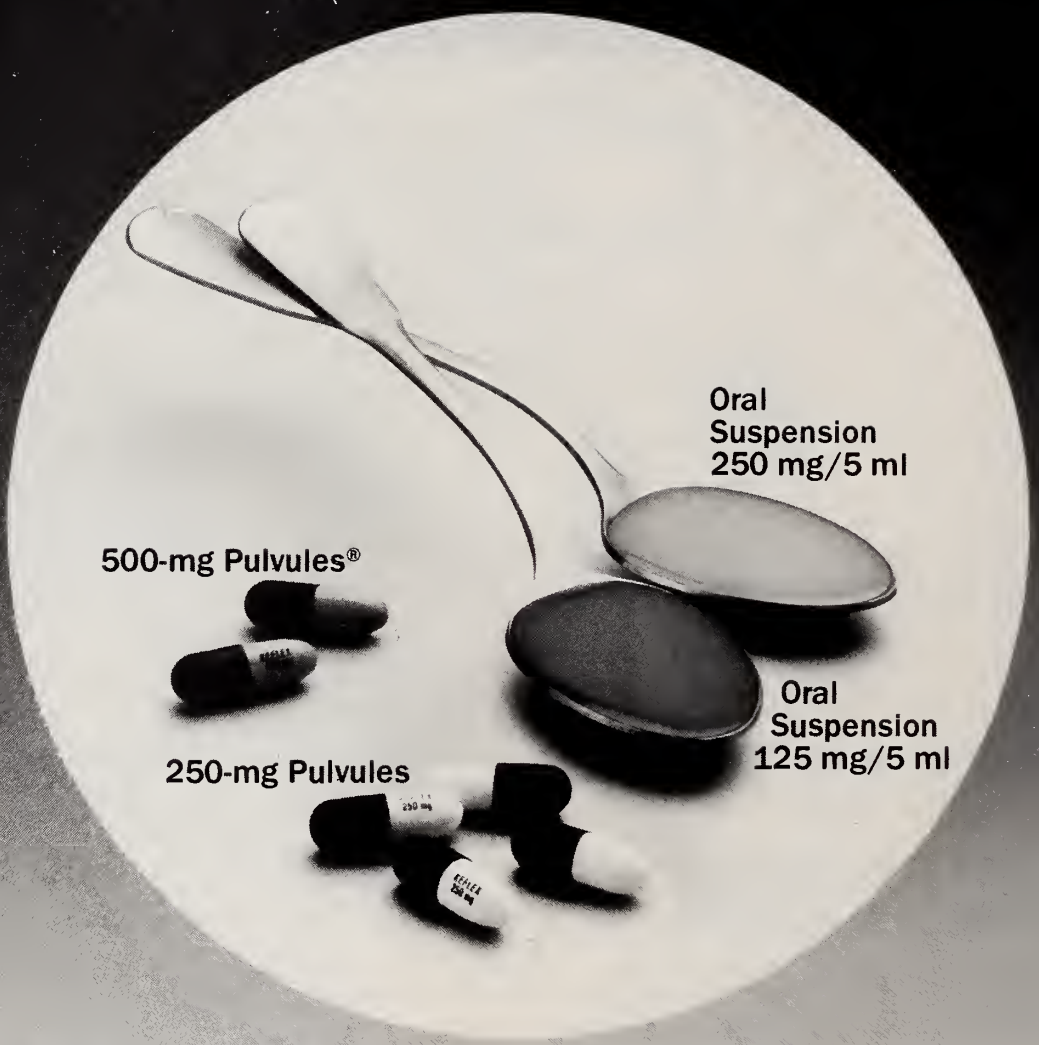
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Read this page like your life depends on it

Learning how to examine your breasts properly can help save your life. Breast cancer found early and treated promptly, has an excellent chance for cure. Once a month, about a week after your period, when your breasts are not tender or swollen, use this simple 3-step self-examination procedure. Regular inspection shows what is normal for you and will give you confidence in your examination. Most lumps are not cancer, but only a doctor can make a diagnosis. Ask your doctor to teach you this method:



1. In bath or shower.

Fingers flat, move gently over each breast with the opposite hand. Check for any lumps, hard knots or thickening.



2. In front of a mirror.

Inspect your breasts with arms at your sides. Next, raise your arms high overhead. Look for any changes in contour, a swelling, dimpling of skin or changes in nipple. Rest palms on hips, press down firmly to flex chest muscles. Left and right breast will not exactly match.

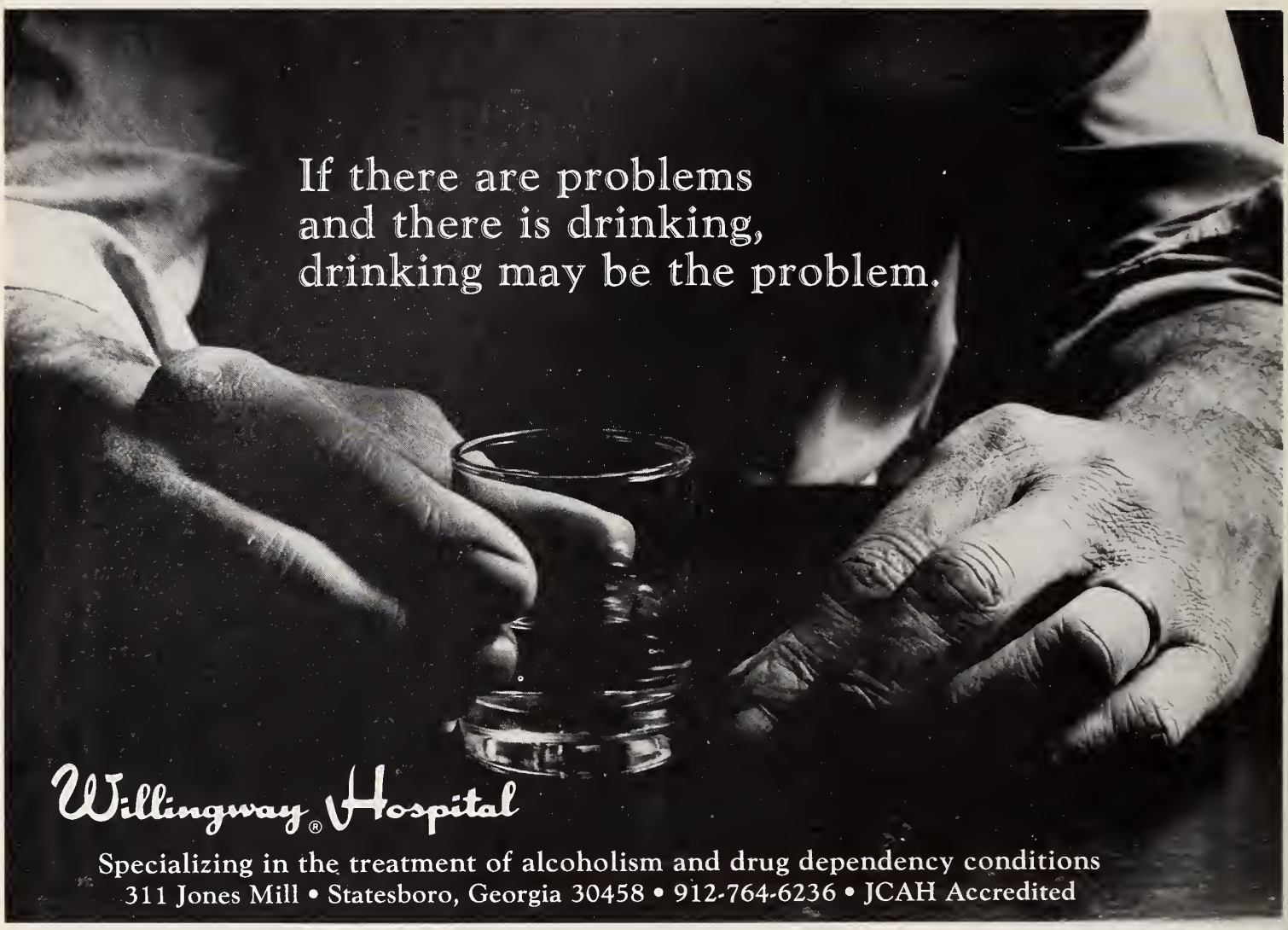


Russell Kirk

3. Lying down.

To examine right breast, put pillow or folded towel under right shoulder. Place right hand behind head to distribute breast tissue more evenly on chest. With left hand fingers flat, press gently in small circular motions around an imaginary clock face. Begin at the outermost top of right breast (12:00, move on to 1:00, and so on, around and back to 12:00). A ridge of firm tissue in the lower curve of each breast is normal. Make about three circles moving closer and including nipple. Slowly repeat procedure on left breast. Notice how breast structure feels. Finally squeeze nipple gently between thumb and index finger. Any discharge, clear or bloody, should be reported to your doctor immediately. The American Cancer Society wants you to know.

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> Soter NA, Wasserman SI, Austen KF. Cold urticaria release into circulation of histamine and eosinophil chemotactic factor of anaphylaxis during cold challenge. N Engl J Med 1976;294:687-90.

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Emergency Physician, Glynn-Brunswick Hospital, 340 beds, base hospital medical control, active EMS program, 20,000+ visits/year, fee-for-service, salary competitive, administrative responsibility, paid malpractice, coastal resort area. Contact Cary Shaffer, MD, (912) 264-6960.

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Board certified urologist, semiretired spring 1986, seeks part-time salaried position as hospital house physician, office urology, VA consultant, surgi-center, clinic, public health, industrial medicine, etc. Prefers coastal area, Carolinas or Georgia. Salary negotiable, will send full details and CV. Reply to Box 1-A, c/o *Journal.*

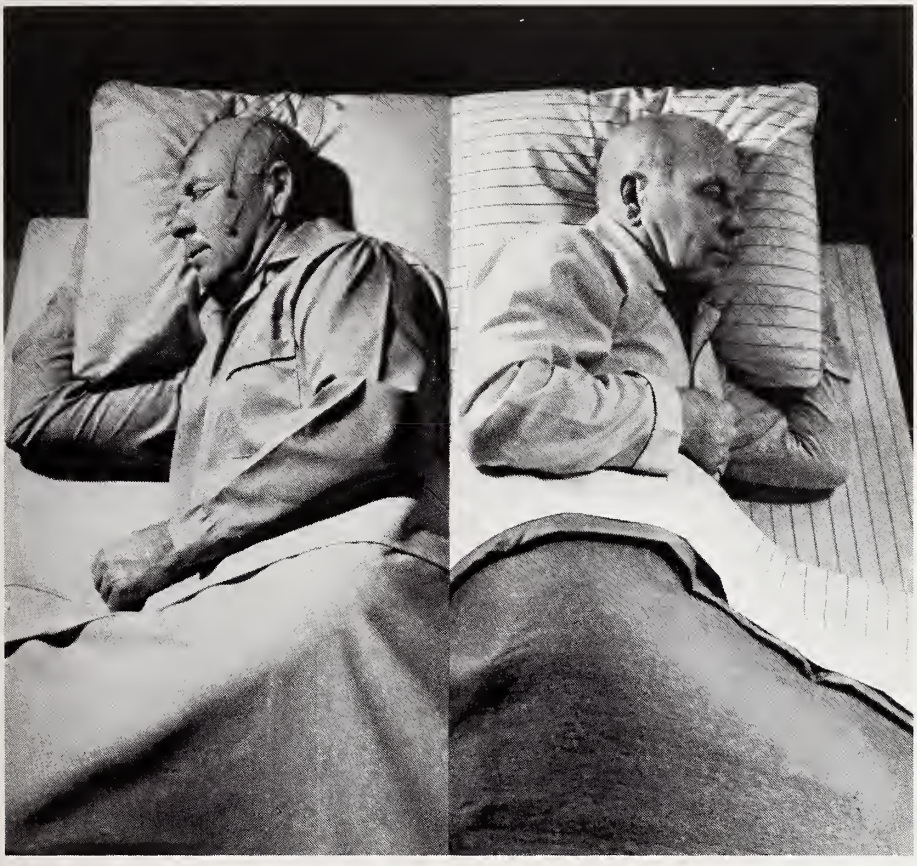
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COMPLETE LABORATORY DOCUMENTATION[1-5]... EXTENSIVE CLINICAL PROOF



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flurazepam HCl/Roche

THE COMPLETE HYPNOTIC PROVIDES ALL THESE BENEFITS:

- Rapid sleep onset[1-6]
- More total sleep time[1-6]
- Undiminished efficacy for at least 28 consecutive nights[2-4]
- Patients usually awake rested and refreshed[7-9]
- Avoids causing early awakenings or rebound insomnia after discontinuation of therapy[2,5,10-12]

Caution patients about driving, operating hazardous machinery or drinking alcohol during therapy. Limit dose to 15 mg in elderly or debilitated patients. Contraindicated during pregnancy.

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References: 1. Kales J *et al: Clin Pharmacol Ther 12*:691-697, Jul-Aug 1971. **2.** Kales A *et al: Clin Pharmacol Ther 18*:356-363, Sep 1975. **3.** Kales A *et al: Clin Pharmacol Ther 19*:576-583, May 1976. **4.** Kales A *et al. Clin Pharmacol Ther 32*:781-788, Dec 1982. **5.** Frost JD Jr, DeLucchi MR: *J Am Geriatr Soc 27*:541-546, Dec 1979. **6.** Kales A, Kales JD: *J Clin Pharmacol 3*:140-150, Apr 1983. **7.** Greenblatt DJ, Allen MD, Shader RI: *Clin Pharmacol Ther 21*:355-361, Mar 1977. **8.** Zimmerman AM: *Curr Ther Res 13*:18-22, Jan 1971. **9.** Amrein R *et al: Drugs Exp Clin Res 9*(1):85-99, 1983. **10.** Monti JM: *Methods Find Exp Clin Pharmacol 3*:303-326, May 1981. **11.** Greenblatt DJ *et al: Sleep 5*(Suppl 1):S18-S27, 1982. **12.** Kales A *et al: Pharmacology 26*:121-137, 1983.

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Before prescribing, please consult complete product information, a summary of which follows:

Indications: Effective in all types of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening; in patients with recurring insomnia or poor sleeping habits; in acute or chronic medical situations requiring restful sleep. Objective sleep laboratory data have shown effectiveness for at least 28 consecutive nights of administration. Since insomnia is often transient and intermittent, prolonged administration is generally not necessary or recommended. Repeated therapy should only be undertaken with appropriate patient evaluation.

Contraindications: Known hypersensitivity to flurazepam HCl; pregnancy. Benzodiazepines may cause fetal damage when administered during pregnancy. Several studies suggest an increased risk of congenital malformations associated with benzodiazepine use during the first trimester. Warn patients of the potential risks to the fetus should the possibility of becoming pregnant exist while receiving flurazepam. Instruct patient to discontinue drug prior to becoming pregnant. Consider the possibility of pregnancy prior to instituting therapy.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. An additive effect may occur if alcohol is consumed the day following use for nighttime sedation. This potential may exist for several days following discontinuation. Caution against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Potential impairment of performance of such activities may occur the day following ingestion. Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, abrupt discontinuation should be avoided with gradual tapering of dosage for those patients on medication for a prolonged period of time. Use caution in administering to addiction-prone individuals or those who might increase dosage.

Precautions: In elderly and debilitated patients, it is recommended that the dosage be limited to 15 mg to reduce risk of oversedation, dizziness, confusion and/or ataxia. Consider potential additive effects with other hypnotics or CNS depressants. Employ usual precautions in severely depressed patients, or in those with latent depression or suicidal tendencies, or in those with impaired renal or hepatic function.

Adverse Reactions: Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported: headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of leukopenia, granulocytopenia, sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations, and elevated SGOT, SGPT, total and direct bilirubins, and alkaline phosphatase; and paradoxical reactions, *e.g.*, excitement, stimulation and hyperactivity.

Dosage: Individualize for maximum beneficial effect. *Adults:* 30 mg usual dosage; 15 mg may suffice in some patients. *Elderly or debilitated patients:* 15 mg recommended initially until response is determined.

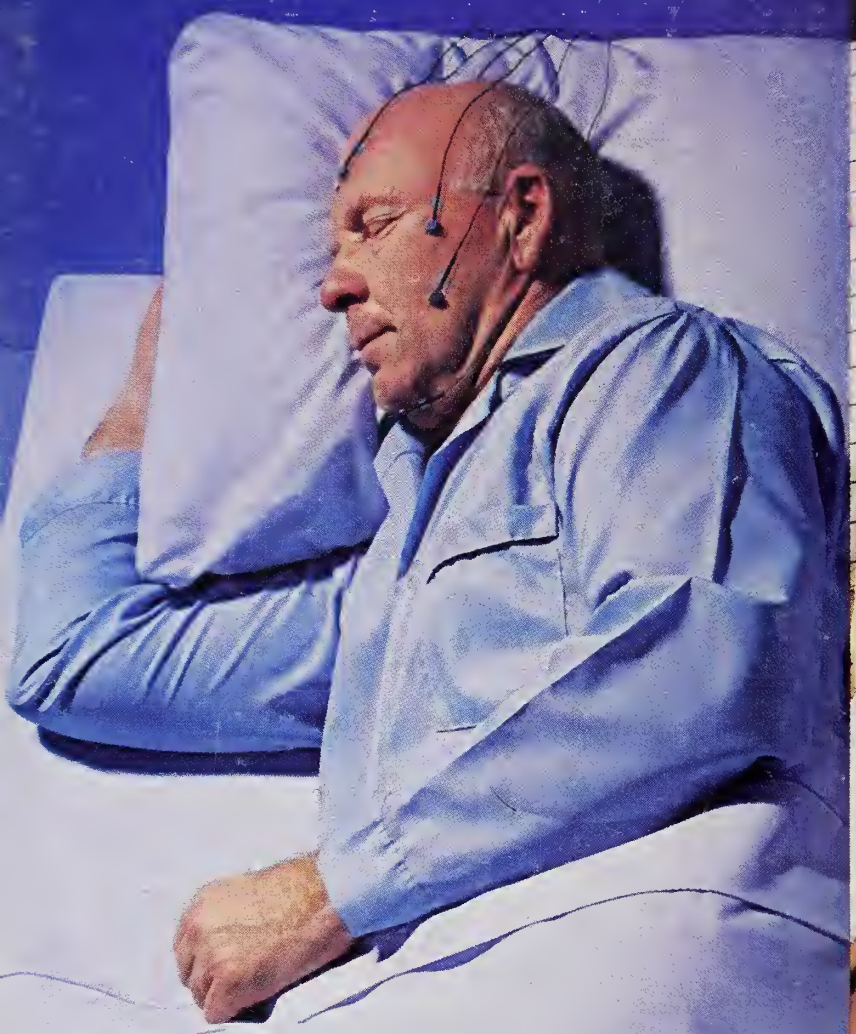
Supplied: Capsules containing 15 mg or 30 mg flurazepam HCl.

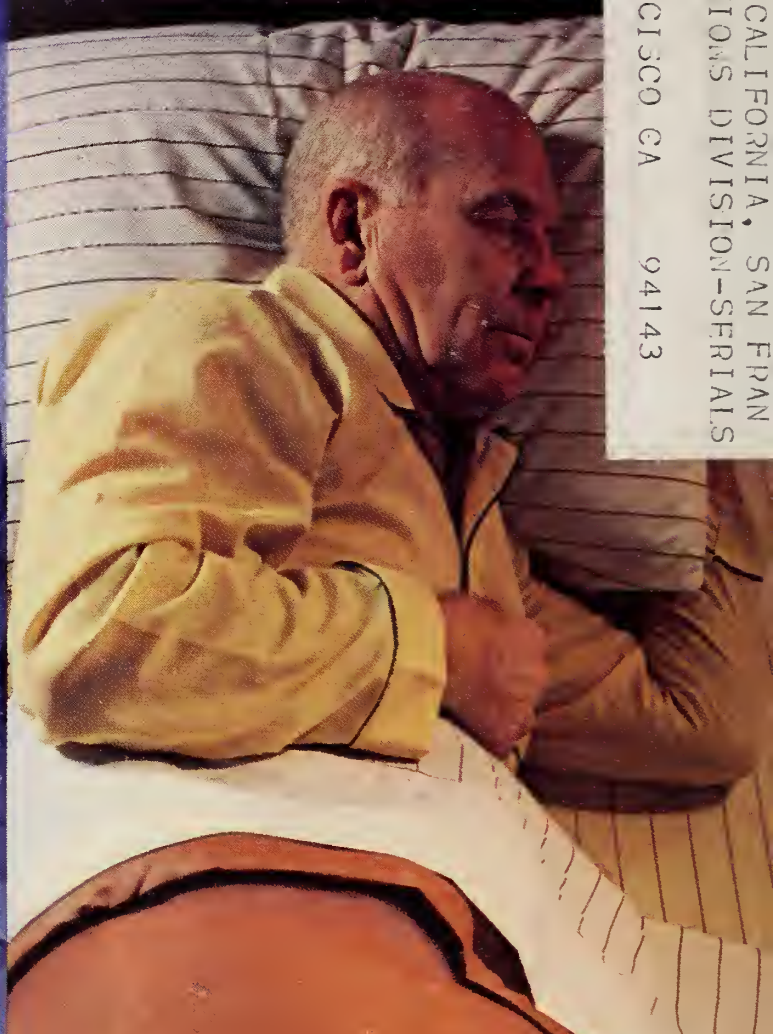
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flurazepam HCl/Roche

STANDS APART

15-MG/30-MG CAPSULES



See preceding page for references and summary of product information.

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JOURNAL
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APRIL 1985



The Auxiliary And The Child

A Special Issue

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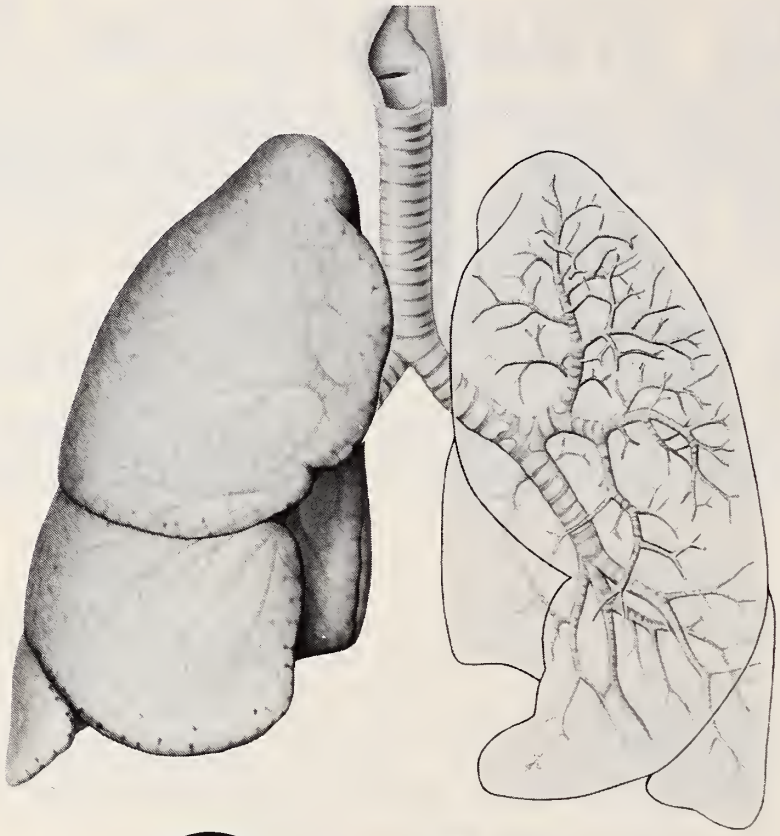


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Consider the causative organisms...



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cefaclor
250-mg Pulvules® t.i.d.

offers effectiveness against the major causes of bacterial bronchitis

H. influenzae*, *H. influenzae*, *S. pneumoniae*, *S. pyogenes
(ampicillin-susceptible) (ampicillin-resistant)

Brief Summary. Consult the package literature for prescribing information.

Indications and Usage: Ceclor* (cefaclor, Lilly) is indicated in the treatment of the following infections when caused by susceptible strains of the designated microorganisms:

Lower respiratory infections, including pneumonia caused by *Streptococcus pneumoniae (Diplococcus pneumoniae), Haemophilus influenzae,* and *S. pyogenes* (group A beta-hemolytic streptococci).

Appropriate culture and susceptibility studies should be performed to determine susceptibility of the causative organism to Ceclor.

Contraindication: Ceclor is contraindicated in patients with known allergy to the cephalosporin group of antibiotics.

Warnings: IN PENICILLIN-SENSITIVE PATIENTS, CEPHALOSPORIN ANTIBIOTICS SHOULD BE ADMINISTERED CAUTIOUSLY. THERE IS CLINICAL AND LABORATORY EVIDENCE OF PARTIAL CROSS-ALLERGENICITY OF THE PENICILLINS AND THE CEPHALOSPORINS, AND THERE ARE INSTANCES IN WHICH PATIENTS HAVE HAD REACTIONS, INCLUDING ANAPHYLAXIS, TO BOTH DRUG CLASSES.

Antibiotics, including Ceclor, should be administered cautiously to any patient who has demonstrated some form of allergy, particularly to drugs.

Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics (including macrolides, semisynthetic penicillins, and cephalosporins); therefore, it is important to consider its diagnosis in patients who develop diarrhea in association with the use of antibiotics. Such colitis may range in severity from mild to life-threatening.

Treatment with broad-spectrum antibiotics alters the normal flora of the colon and may permit overgrowth of clostridia. Studies indicate that a toxin produced by *Clostridium difficile* is one primary cause of antibiotic-associated colitis.

Mild cases of pseudomembranous colitis usually respond to drug discontinuance alone. In moderate to severe cases, management should include sigmoidoscopy, appropriate bacteriologic studies, and fluid, electrolyte, and protein supplementation. When the colitis does not improve after the drug has been discontinued, or when it is severe, oral vancomycin is the drug of choice for antibiotic-associated pseudomembranous colitis produced by *C. difficile*. Other causes of colitis should be ruled out.

Precautions: *General Precautions* — If an allergic reaction to Ceclor* (cefaclor, Lilly) occurs, the drug should be discontinued, and, if necessary, the patient should be treated with appropriate agents, e.g., pressor amines, antihistamines, or corticosteroids.

Prolonged use of Ceclor may result in the overgrowth of nonsusceptible organisms. Careful observation of the patient is essential. If superinfection occurs during therapy, appropriate measures should be taken.

Positive direct Coombs' tests have been reported during treatment with the cephalosporin antibiotics. In hematologic studies or in transfusion cross-matching procedures when antiglobulin tests are performed on the minor side or in Coombs' testing of newborns whose mothers have received cephalosporin antibiotics before parturition, it should be recognized that a positive Coombs' test may be due to the drug.

Ceclor should be administered with caution in the presence of markedly impaired renal function. Under such conditions, careful clinical observation and laboratory studies should be made because safe dosage may be lower than that usually recommended.

As a result of administration of Ceclor, a false-positive reaction for glucose in the urine may occur. This has been observed with Benedict's and Fehling's solutions and also with Clinitest* tablets but not with Tes-Tape* (Glucose Enzymatic Test Strip, USP, Lilly).

Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.

Usage in Pregnancy — Pregnancy Category B — Reproduction studies have been performed in mice and rats at doses up to 12 times the human dose and in ferrets given three times the maximum human dose and have revealed no evidence of impaired fertility or harm to the fetus due to Ceclor* (cefaclor, Lilly). There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed.

Nursing Mothers — Small amounts of Ceclor have been detected in mother's milk following administration of single 500-mg doses. Average levels were 0.18, 0.20, 0.21, and 0.16 mcg/ml at two, three, four, and five hours respectively. Trace amounts were detected at one hour. The effect on nursing infants is not known. Caution should be exercised when Ceclor is administered to a nursing woman.

Usage in Children — Safety and effectiveness of this product for use in infants less than one month of age have not been established.

Adverse Reactions: Adverse effects considered related to therapy with Ceclor are uncommon and are listed below.

Gastrointestinal symptoms occur in about 2.5 percent of patients and include diarrhea (1 in 70).

Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment. Nausea and vomiting have been reported rarely.

Hypersensitivity reactions have been reported in about 1.5 percent of patients and include morbiliform eruptions (1 in 100). Pruritus, urticaria, and positive Coombs' tests each occur in less than 1 in 200 patients. Cases of serum-sickness-like reactions (erythema multiforme or the above skin manifestations accompanied by arthritis/arthralgia and, frequently, fever) have been reported. These reactions are apparently due to hypersensitivity and have usually occurred during or following a second course of therapy with Ceclor. Such reactions have been reported more frequently in children than in adults. Signs and symptoms usually occur a few days after initiation of therapy and subside within a few days after cessation of therapy. No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome.

Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy.

Other effects considered related to therapy included eosinophilia (1 in 50 patients) and genital pruritus or vaginitis (less than 1 in 100 patients).

Causal Relationship Uncertain — Transitory abnormalities in clinical laboratory test results have been reported. Although they were of uncertain etiology, they are listed below to serve as alerting information for the physician.

Hepatic — Slight elevations in SGOT, SGPT, or alkaline phosphatase values (1 in 40).

Hematopoietic — Transient fluctuations in leukocyte count, predominantly lymphocytosis occurring in infants and young children (1 in 40).

Renal — Slight elevations in BUN or serum creatinine (less than 1 in 500) or abnormal urinalysis (less than 1 in 200).

[061782R]

Note. Ceclor* (cefaclor, Lilly) is contraindicated in patients with known allergy to the cephalosporins and should be given cautiously to penicillin-allergic patients.

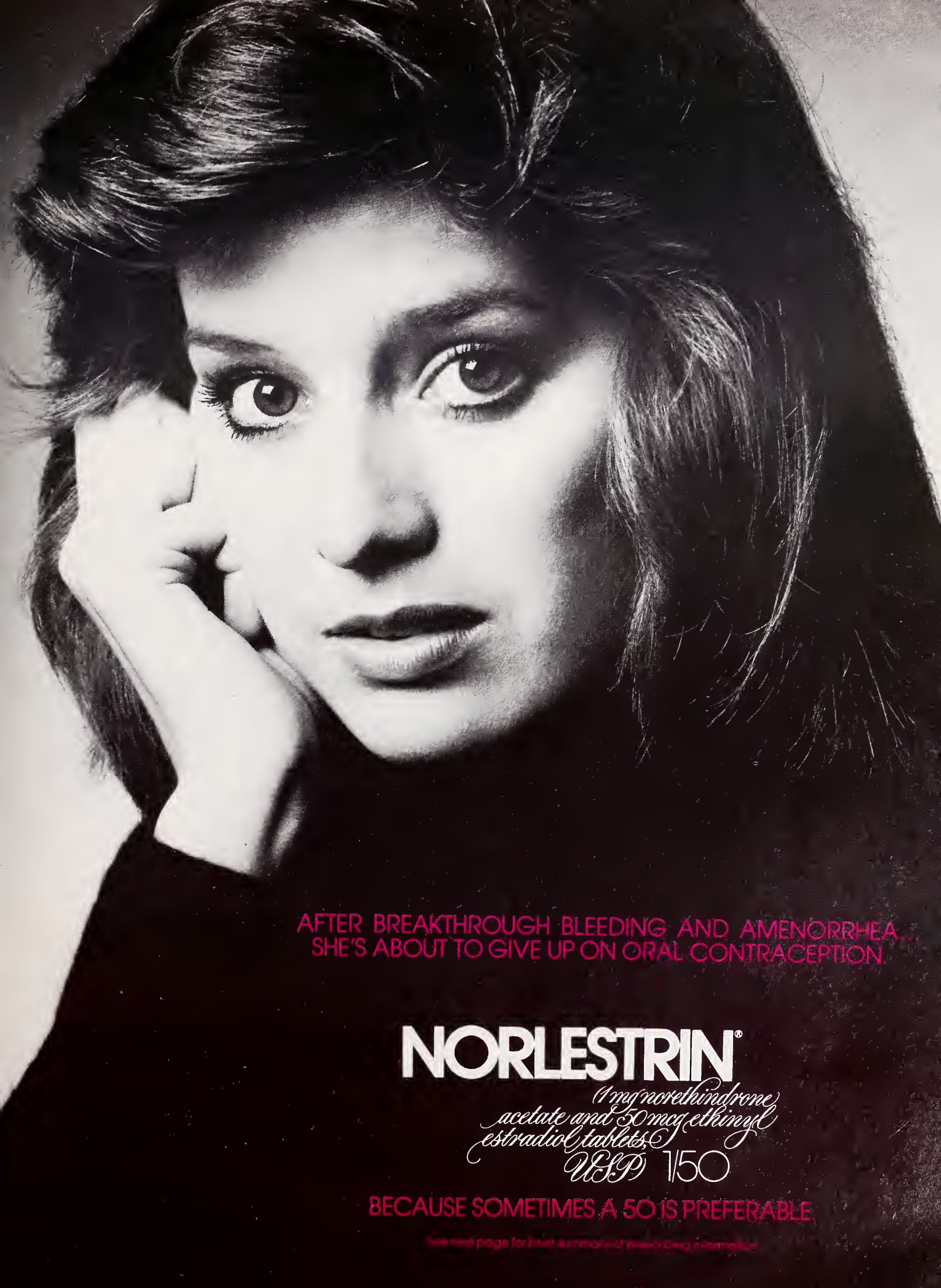
Penicillin is the usual drug of choice in the treatment and prevention of streptococcal infections, including the prophylaxis of rheumatic fever. See prescribing information.

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Additional information available to the profession on request from Eli Lilly and Company, Indianapolis, Indiana 46285

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AFTER BREAKTHROUGH BLEEDING AND AMENORRHEA...
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NORLESTRIN®
1 mg norethindrone acetate and 50 mcg ethinyl estradiol tablets, USP 1/50
BECAUSE SOMETIMES A 50 IS PREFERABLE.
See next page for brief summary of prescribing information.

Brief Summary of Prescribing Information
NORLESTRIN® (norethindrone acetate and ethinyl estradiol tablets, USP)

See section under **Special Notes on Administration and HOW SUPPLIED.**
Before prescribing, please see full prescribing information. A Brief Summary follows.

DESCRIPTION
Norlestrin Products are progestogen-estrogen combinations.

INDICATIONS AND USAGE
Norlestrin Products are indicated for the prevention of pregnancy in women who elect to use oral contraceptives as a method of contraception.

In clinical trials with Norlestrin 1/50 involving 25,983 therapy cycles, there was a pregnancy rate of 0.05 per 100 woman-years; in clinical trials with Norlestrin 2.5/50 involving 96,388 cycles, there was a pregnancy rate of 0.22 per 100 woman-years.

Dose-Related Risk of Thromboembolism from Oral Contraceptives: Studies have shown a positive association between the dose of estrogens in oral contraceptives and the risk of thromboembolism. It is prudent and in keeping with good principles of therapeutics to minimize exposure to estrogen. The oral contraceptive prescribed for any given patient should be that product which contains the least amount of estrogen that is compatible with an acceptable pregnancy rate and patient acceptance.

CONTRAINDICATIONS
1. Thrombophlebitis or thromboembolic disorders
2. A past history of deep-vein thrombophlebitis or thromboembolic disorders
3. Cerebral vascular or coronary artery disease
4. Known or suspected carcinoma of the breast
5. Known or suspected estrogen-dependent neoplasia
6. Undiagnosed abnormal genital bleeding
7. Known or suspected pregnancy (See WARNING No. 5)
8. Benign or malignant liver tumor which developed during the use of oral contraceptives or other estrogen-containing products.

WARNINGS

Cigarette smoking increases the risk of serious cardiovascular side effects from oral contraceptive use. The risk increases with age and with heavy smoking (15 or more cigarettes per day) and is quite marked in women over 35 years of age. Women who use oral contraceptives should be strongly advised not to smoke.

The use of oral contraceptives is associated with increased risk of several serious conditions including thromboembolism, stroke, myocardial infarction, hepatic adenoma, gallbladder disease, and hypertension. Practitioners prescribing oral contraceptives should be familiar with the following information relating to these risks.

1. *Thromboembolic Disorders and Other Vascular Problems.* An increased risk of thromboembolic and thrombotic disease associated with the use of oral contraceptives is well-established. Studies have demonstrated an increased risk of fatal and nonfatal venous thromboembolism and stroke, both hemorrhagic and thrombotic.

Cerebrovascular Disorders: In a collaborative study in women with and without predisposing causes, it was estimated that the risk of hemorrhagic stroke was 2.0 times greater in users than nonusers; and the risk of thrombotic stroke was 4.0 to 9.5 times greater.

Myocardial Infarction: An increased risk of myocardial infarction associated with oral contraceptives has been reported confirming a previously suspected association. These studies found that the greater the number of underlying risk factors (cigarette smoking, hypertension, hypercholesterolemia, obesity, diabetes, history of preeclamptic toxemia) for coronary artery disease, the higher the risk of developing myocardial infarction, regardless of whether the patient was an oral contraceptive user or not. Oral contraceptives, however, were found to be a clear additional risk factor.

It has been estimated that users who do not smoke (smoking is considered a major predisposing condition to myocardial infarction) are about twice as likely to have a fatal myocardial infarction as nonusers who do not smoke. Oral contraceptive users who are smokers have about a fivefold increased risk of fatal infarction compared to users who do not smoke, but about a tenfold to twelvefold increased risk compared to nonusers who do not smoke. The amount of smoking is also an important factor.

Risk of Dose: In an analysis of data, British investigators concluded that the risk of thromboembolism, including coronary thrombosis, is directly related to the dose of estrogen used in oral contraceptives; however, the quantity of estrogen may not be the sole factor involved.

Persistence of Risk: Two studies have suggested that an increased risk may persist for as long as 6 years after discontinuation of oral contraceptive use for cerebrovascular disease and 9 years for myocardial infarction. In addition, a prospective study suggested the persistence of risk for subarachnoid hemorrhage.

Estimate of Excess Mortality from Circulatory Diseases: The risk of diseases of the circulatory system is concentrated in older women, in those with a long duration of use, and in cigarette smokers.

A study of available data from a variety of sources concluded that the mortality associated with all methods of birth control is low and below that associated with childbirth, with the exception of oral contraceptives in women over 40 who smoke.

The risk of thromboembolic and thrombotic diseases associated with oral contraceptives increases with age after approximately age 30 and, for myocardial infarction, is further increased by hypertension, hypercholesterolemia, obesity, diabetes, or history of preeclamptic toxemia, and especially by cigarette smoking.

The physician and the patient should be alert to the earliest manifestations of thromboembolic and thrombotic disorders. Should any occur or be suspected, the drug should be discontinued immediately.

A fourfold to sixfold increased risk of postsurgery thromboembolic complications has been reported in users. If feasible, oral contraceptives should be discontinued at least four weeks before surgery of a type associated with an increased risk of thromboembolism or prolonged immobilization.

2. *Ocular Lesions.* Neuro-ocular lesions, such as optic neuritis or retinal thrombosis, have been associated with the use of oral contraceptives. Discontinue the oral contraceptive if there is unexplained sudden or gradual, partial, or complete loss of vision; onset of proptosis or diplopia; papilledema; or retinal vascular lesions.

3. *Carcinoma.* Long-term continuous administration of estrogen in certain animal species increases the frequency of carcinoma of the breast, cervix, vagina, and liver.

In humans, an increased risk of endometrial carcinoma associated with the prolonged use of exogenous estrogen in postmenopausal women has been reported. However, there is no evidence suggesting increased risk of endometrial cancer in users of conventional combination or progestogen-only oral contraceptives.

Studies found no evidence of increase in breast cancer in women taking oral contraceptives; however, an excess risk in users with documented benign breast disease was reported.

There is no confirmed evidence of an increased risk of cancer associated with oral contraceptives. Close clinical surveillance of users is, nevertheless, essential. In cases of undiagnosed persistent or recurrent abnormal vaginal bleeding, appropriate diagnostic measures should be taken to rule out malignancy. Women with a strong family history of breast cancer, or who have breast nodules, fibrocystic disease or abnormal mammograms, should be monitored with particular care.

4. *Hepatic Tumors.* Benign hepatic adenomas have been found to be associated with oral contraceptives. Because hepatic adenomas may rupture and may cause death through intra-abdominal hemorrhage, they should be considered in women presenting abdominal pain and tenderness, abdominal mass, or shock.

A few cases of hepatocellular carcinoma have been reported in women taking oral contraceptives. The relationship of these drugs to this type of malignancy is not known at this time.

5. *Usage in or Immediately Preceding Pregnancy: Birth Defects in Offspring, and Malignancy in Female Offspring.* During early pregnancy, female sex hormones may seriously damage the offspring.

An increased risk of congenital anomalies, including heart defects and limb defects, has been reported with the use of oral contraceptives in pregnancy.

There is some evidence that triploidy and possible other types of polyploidy are increased among abortuses from women who become pregnant soon after ceasing oral contraceptives.

Pregnancy should be ruled out before continuing an oral contraceptive in any patient who has missed two consecutive menstrual periods. If the patient has not adhered to the schedule, the possibility of pregnancy should be considered at the time of the first missed period, and oral contraceptives should be withheld until pregnancy has been ruled out. If pregnancy is confirmed, the patient should be apprised of the potential risks to the fetus and the advisability of continuation of the pregnancy should be discussed.

Women who discontinue oral contraceptives with the intent of becoming pregnant should use an alternate form of contraception for a period of time before attempting to conceive.

Administration of progestogen-only or progestogen-estrogen combinations to induce withdrawal bleeding should not be used as a test of pregnancy.

6. *Gallbladder Disease.* Studies report an increased risk of surgically confirmed gallbladder disease in users of oral contraceptives.

7. *Carbohydrate and Lipid Metabolic Effects.* Because decreased glucose tolerance has been observed in a significant percentage of patients, prediabetic and diabetic patients should be carefully observed while receiving oral contraceptives.

An increase in triglycerides and total phospholipids has been observed.

8. *Elevated Blood Pressure.* An increase in blood pressure has been reported in patients receiving oral contraceptives. The prevalence in users increases with longer exposure. Age is also strongly correlated with development of hypertension. Women who previously have had hypertension during pregnancy may be more likely to develop elevation of blood pressure.

9. *Headache.* Onset or exacerbation of migraine or development of headache of a new pattern which is recurrent, persistent, or severe, requires discontinuation of oral contraceptives.

10. *Bleeding Irregularities.* Breakthrough bleeding, spotting, and amenorrhea are frequent reasons for patients discontinuing oral contraceptives. In breakthrough bleeding, nonfunctional causes should be borne in mind. In undiagnosed abnormal bleeding from the vagina, adequate diagnostic measures are indicated to rule out pregnancy or malignancy.

Women with a past history of oligomenorrhea or secondary amenorrhea, or young women without regular cycles should be advised that they may have a tendency to remain anovulatory or to become amenorrheic after discontinuation of oral contraceptives.

11. *Ectopic Pregnancy.* Ectopic as well as intrauterine pregnancy may occur in contraceptive failures.

12. *Breast-Feeding.* Oral contraceptives may interfere with lactation. Furthermore, a small fraction of the hormonal agents in oral contraceptives has been identified in the milk of mothers receiving these drugs.

PRECAUTIONS
1. A complete medical and family history should be taken prior to the initiation of oral contraceptives. The pretreatment and periodic physical examinations should include special reference to blood pressure, breasts, abdomen, and pelvic organs, including Papanicolaou smear and relevant laboratory tests. As a general rule, oral contraceptives should not be prescribed for longer than one year without another examination.
2. Preexisting uterine leiomyomata may increase in size.
3. Patients with a history of psychic depression should be carefully observed and the drug discontinued if depression recurs to a serious degree.
4. Oral contraceptives may cause fluid retention and should be prescribed with caution, and only with careful monitoring, in patients with conditions which might be aggravated.
5. Patients with a past history of jaundice during pregnancy have an increased risk of recurrence of jaundice. If jaundice develops, the medication should be discontinued.
6. Steroid hormones may be poorly metabolized and should be administered with caution in patients with impaired liver function.
7. Users may have disturbances in normal tryptophan metabolism, which may result in a relative pyridoxine deficiency.
8. Serum folate levels may be depressed.
9. The pathologist should be advised of oral contraceptive therapy when relevant specimens are submitted.
10. Certain endocrine and liver function tests and blood components may be affected.

(a) Increased sulfobromophthalein retention. (b) Increased prothrombin and factors VII, VIII, IX, and X; decreased antithrombin 3; increased norepinephrine-induced platelet aggregability. (c) Increased thyroid-binding globulin (TBG) leading to increased circulating total thyroid hormone. (d) Decreased pregnanediol excretion. (e) Reduced response to metyrapone test.

Drug Interactions: Reduced efficacy and increased incidence of breakthrough bleeding have been associated with concomitant use of rifampin. A similar association has been suggested with barbiturates, phenylbutazone, phenytoin sodium, tetracycline, and ampicillin.

ADVERSE REACTIONS
An increased risk of the following serious adverse reactions has been associated with oral contraceptives: thrombophlebitis; pulmonary embolism; coronary thrombosis; cerebral thrombosis; cerebral hemorrhage; hypertension; gallbladder disease; benign hepatomas; congenital anomalies.

There is evidence of an association between the following conditions and the use of oral contraceptives, although additional confirmatory studies are needed: mesenteric thrombosis, neuro-ocular lesions, eg, retinal thrombosis and optic neuritis.

The following adverse reactions have been reported in patients receiving oral contraceptives and are believed to be drug related: nausea and/or vomiting, usually the most common adverse reactions, occur in approximately 10% or less of patients during the first cycle. Other reactions, as a general rule, are seen much less frequently or only occasionally: gastrointestinal symptoms; breakthrough bleeding; spotting; change in menstrual flow: dysmenorrhea, amenorrhea during and after treatment, temporary infertility after discontinuance of treatment; edema; chloasma or melasma; breast changes; change in weight; change in cervical erosion and cervical secretion; possible diminution in lactation when given immediately postpartum; cholestatic jaundice; migraine; increase in size of uterine leiomyomata; rash (allergic); mental depression; reduced tolerance to carbohydrates; vaginal candidiasis; change in corneal curvature; intolerance to contact lenses.

The following adverse reactions have been reported and the association has been neither confirmed nor refuted: premenstrual-like syndrome; cataracts; changes in libido; chorea; changes in appetite; cystitis-like syndrome; headache; nervousness; dizziness; hirsutism; loss of scalp hair; erythema multiforme; erythema nodosum; hemorrhagic eruption; vaginitis; porphyria.

Special Notes on Administration
Menstruation usually begins two or three days, but may begin as late as the fourth or fifth day, after discontinuing medication.

After several months on treatment, bleeding may be reduced to a point of virtual absence; reduced flow may be a result of medication and not indicative of pregnancy.

HOW SUPPLIED
Norlestrin [21] 1/50 is available in compacts each containing 21 tablets. Each tablet contains 1 mg of norethindrone acetate and 50 mcg of ethinyl estradiol. Available in packages of five compacts and packages of five refills.

Norlestrin [21] 2.5/50 is available in compacts each containing 21 tablets. Each tablet contains 2.5 mg of norethindrone acetate and 50 mcg of ethinyl estradiol. Available in packages of five compacts and packages of five refills.

Norlestrin [Fe] 1/50 is available in compacts each containing 21 yellow tablets and 7 brown tablets. Each yellow tablet contains 1 mg of norethindrone acetate and 50 mcg of ethinyl estradiol. Each brown tablet contains 75 mg of ferrous fumarate. USP. Available in packages of five compacts and packages of five refills.

Norlestrin [FE] 2.5/50 is available in compacts each containing 21 pink tablets and 7 brown tablets. Each pink tablet contains 2.5 mg of norethindrone acetate and 50 mcg of ethinyl estradiol. Each brown tablet contains 75 mg of ferrous fumarate. USP. Available in packages of five compacts and packages of five refills.

Norlestrin [28] 1/50 is available in compacts each containing 21 yellow tablets and 7 white inert tablets. Each yellow tablet contains 1 mg of norethindrone acetate and 50 mcg of ethinyl estradiol. Available in packages of five compacts and packages of five refills.

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Morris Plains, New Jersey 07950

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THE COVER

We are indebted to Bill Tippins, son of Dr. and Mrs. William C. Tippins, of Dunwoody, for the chalk drawing he received from a patient while employed in the pre-teen program for emotionally disturbed children at Peachford Hospital in Atlanta; and to Mickey Hutchinson, (Mrs. J. R. B.) of Atlanta, who further adapted the drawing.

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(ISOSORBIDE DINITRATE)

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5 mg 10 mg
Chewable Tablets

5 mg 10 mg 20 mg 30 mg 40 mg
Oral "Swallow" Tablets

40 mg
Sustained Action "Swallow" Tablets

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See following page for brief summary of prescribing information.

SORBITRATE®
(ISOSORBIDE DINITRATE)

Please consult full prescribing information before use. A summary follows:

INDICATIONS AND USAGE: SORBITRATE (isosorbide dinitrate) is indicated for the treatment and prevention of angina pectoris. All dosage forms of isosorbide dinitrate may be used prophylactically to decrease frequency and severity of anginal attacks and can be expected to decrease the need for sublingual nitroglycerin.

The sublingual and chewable forms of the drug are indicated for acute prophylaxis of angina pectoris when taken a few minutes before situations likely to provoke anginal attacks. Because of a slower onset of effect, the oral forms of isosorbide dinitrate are not indicated for acute prophylaxis.

CONTRAINDICATIONS: SORBITRATE is contraindicated in patients who have shown purported hypersensitivity or idiosyncrasy to it or other nitrates or nitrites. Epinephrine and related compounds are ineffective in reversing the severe hypotensive events associated with overdose and are contraindicated in this situation.

WARNINGS: The benefits of SORBITRATE during the early days of an acute myocardial infarction have not been established. If one elects to use organic nitrates in early infarction, hemodynamic monitoring and frequent clinical assessment should be used because of the potential deleterious effects of hypotension.

PRECAUTIONS: General: Severe hypotensive response, particularly with upright posture, may occur with even small doses of SORBITRATE. The drug should therefore be used with caution in subjects who may have blood volume depletion from diuretic therapy or in subjects who have low systolic blood pressure (eg, below 90 mmHg). Paradoxical bradycardia and increased angina pectoris may accompany nitrate-induced hypotension. Nitrate therapy may aggravate the angina caused by hypertrophic cardiomyopathy.

Marked symptomatic, orthostatic hypotension has been reported when calcium channel blockers and organic nitrates were used in combination. Dose adjustment of either class of agents may be necessary.

Tolerance to this drug and cross-tolerance to other nitrates and nitrites may occur. Tolerance to the vascular and antianginal effects of isosorbide dinitrate or nitroglycerin has been demonstrated in clinical trials, experience through occupational exposure, and in isolated tissue experiments in the laboratory. The importance of tolerance to the appropriate use of isosorbide dinitrate in the management of patients with angina pectoris has not been determined. However, one clinical trial using treadmill exercise tolerance (as an end point) found an 8-hour duration of action of oral isosorbide dinitrate following the first dose (after a 2-week placebo washout) and only a 2-hour duration of effect of the same dose after 1 week of repetitive dosing at conventional dosing intervals. On the other hand, several trials have been able to differentiate isosorbide dinitrate from placebo after 4 weeks of therapy and, in open trials, an effect seems detectable for as long as several months.

Tolerance clearly occurs in industrial workers continuously exposed to nitroglycerin. Moreover, physical dependence also occurs since chest pain, acute myocardial infarction, and even sudden death have occurred during temporary withdrawal of nitroglycerin from the workers. In clinical trials in angina patients, there are reports of anginal attacks being more easily provoked and of rebound in the hemodynamic effects soon after nitrate withdrawal. The relative importance of these observations to the routine, clinical use of isosorbide dinitrate is not known. However, it seems prudent to gradually withdraw patients from isosorbide dinitrate when the therapy is being terminated, rather than stopping the drug abruptly.

Information for Patients: Headache may occur during initial therapy with SORBITRATE. Headache is usually relieved by the use of standard headache remedies or by lowering the dose and tends to disappear after the first week or two of use.

Drug Interactions: Alcohol may enhance any marked sensitivity to the hypotensive effect of nitrates.

Isosorbide dinitrate acts directly on vascular smooth muscle; therefore, any other agent that depends on vascular smooth muscle as the final common path can be expected to have decreased or increased effect depending on the agent.

Carcinogenesis, Mutagenesis, Impairment of Fertility: No long-term studies in animals have been performed to evaluate the carcinogenic potential of this drug. A modified two-litter reproduction study in rats fed isosorbide dinitrate at 25 or 100 mg/kg/day did not reveal any effects on fertility or gestation or any remarkable gross pathology in any parent or offspring fed isosorbide dinitrate as compared with rats fed a basal-controlled diet.

Pregnancy Category C: Isosorbide dinitrate has been shown to cause a dose-related increase in embryotoxicity (increase in mummified pups) in rabbits at oral doses 35 and 150 times the maximum recommended human daily dose. There are no adequate and well-controlled studies in pregnant women. SORBITRATE should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers: It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when SORBITRATE is administered to a nursing woman.

Pediatric Use: The safety and effectiveness of SORBITRATE in children has not been established.

ADVERSE REACTIONS: Adverse reactions, particularly headache and hypotension, are dose-related. In clinical trials at various doses, the following have been observed:

Headache is the most common (reported incidence varies widely, apparently being dose-related, with an average occurrence of about 25%) adverse reaction and may be severe and persistent. Cutaneous vasodilation with flushing may occur. Transient episodes of dizziness and weakness, as well as other signs of cerebral ischemia associated with postural hypotension, may occasionally develop (the incidence of reported symptomatic hypotension ranges from 2% to 36%). An occasional individual will exhibit marked sensitivity to the hypotensive effects of nitrates and severe responses (nausea, vomiting, weakness, restlessness, pallor, perspiration, and collapse) may occur even with the usual therapeutic dose. Drug rash and/or exfoliative dermatitis may occasionally occur. Nausea and vomiting appear to be uncommon. Case reports of clinically significant methemoglobinemia are rare at conventional doses of organic nitrates. The formation of methemoglobin is dose-related and, in the case of genetic abnormalities of hemoglobin that favor methemoglobin formation, even conventional doses of organic nitrate could produce harmful concentrations of methemoglobin.

DOSAGE AND ADMINISTRATION: For the treatment of angina pectoris, the usual starting dose for sublingual SORBITRATE is 2.5 to 5 mg; for chewable tablets, 5 mg; for oral (swallowed) tablets, 5 to 20 mg; and for controlled-release forms, 40 mg.

SORBITRATE should be titrated upward until angina is relieved or side effects limit the dose. In ambulatory patients, the magnitude of the incremental dose increase should be guided by measurements of standing blood pressure.

The initial dosage of sublingual or chewable SORBITRATE for prophylactic therapy in angina pectoris patients is generally 5 or 10 mg every 2 to 3 hours. Adequate controlled clinical studies demonstrating the effectiveness of chronic maintenance therapy with these dosage forms have not been reported.

SORBITRATE in oral doses of 10 to 40 mg given every 6 hours or in oral controlled-release doses of 40 to 80 mg given every 8 to 12 hours is generally recommended. The extent to which development of tolerance should modify the dosage program has not been defined. *The oral controlled-release forms of isosorbide dinitrate should not be chewed.*

DOSAGE FORMS AVAILABLE: Sublingual Tablets (2.5, 5, 10 mg); Chewable Tablets (5, 10 mg); Oral Tablets (5, 10, 20, 30, 40 mg); Sustained Action Tablets (40 mg).

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And when you get any prescription, be sure you know—

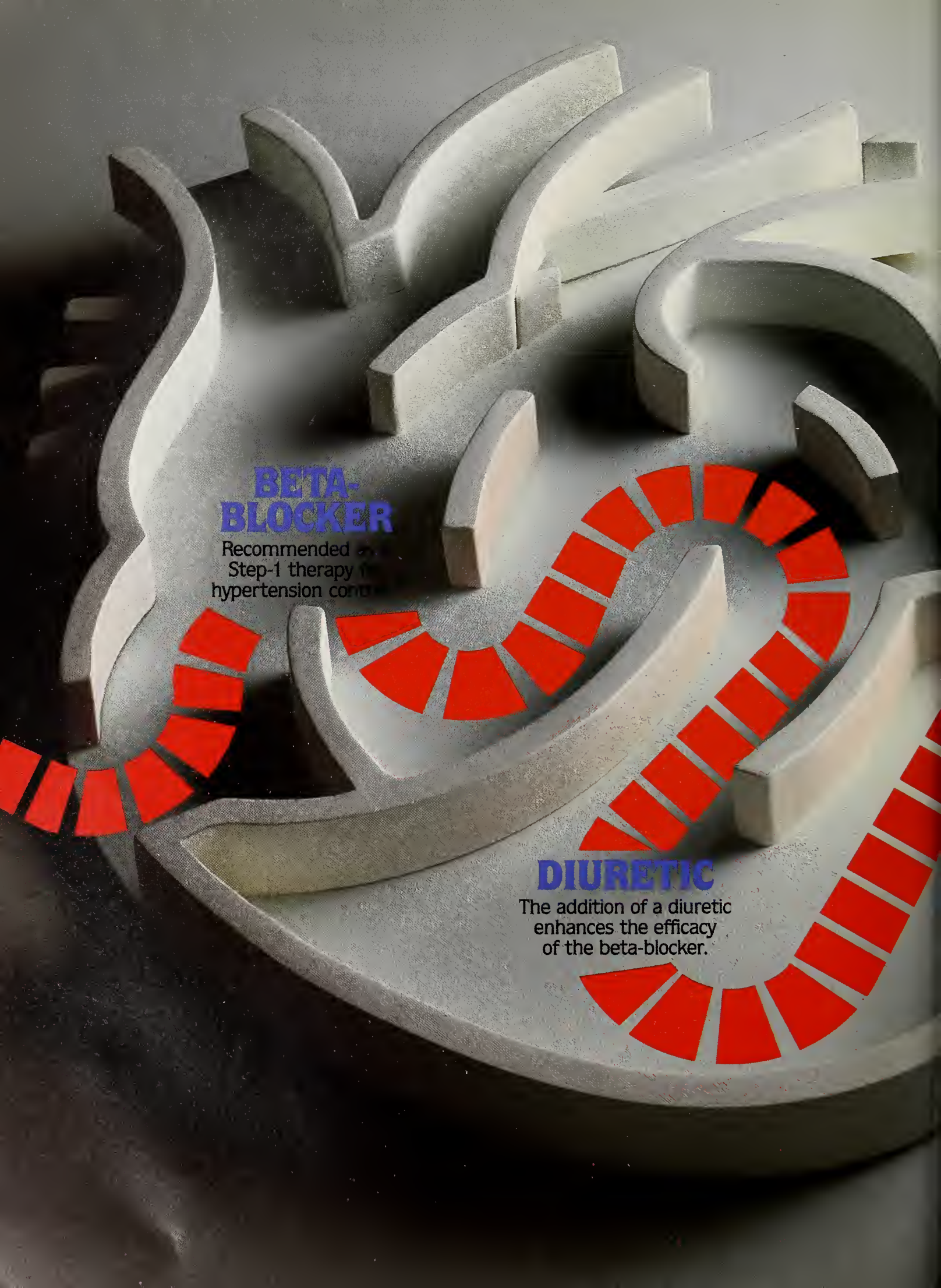
- **The name** of the drug
- **Its purpose**—what conditions does it treat?
- **How and when** to take the drug—and when to stop taking it
- What **food, drinks and other drugs to avoid** while taking it
- What **side effects** may result—are they serious, short-term, long-term, etc.?

If you have any questions about your prescription, *ask your doctor or pharmacist.*

A message from the Food and Drug Administration. For more material about being an informed patient, write to: FDA, HFE-88, Rockville, Md. 20857.

The Logical Path to Compliance




BETA-
BLOCKER
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enhances the efficacy
of the beta-blocker.

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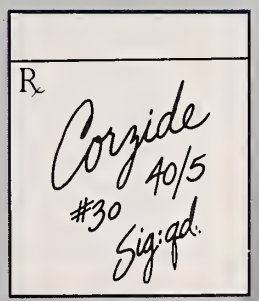
When hypertension control is complicated by the need for a beta-blocker plus a thiazide, CORZIDE® simplifies patient compliance with reliable once-a-day dosing in a single tablet.



CORZIDE®

(nadolol-bendroflumethiazide tablets)

Makes good sense



SQUIBB

Innovators in cardiovascular medicine

*Joint National Committee on Detection, Evaluation and Treatment of High Blood Pressure: The 1984 report of the Joint National Committee on Detection, Evaluation and Treatment of High Blood Pressure. Arch Intern Med 144:1045-1057, 1984.

Please see brief summary of prescribing information on following page

CORZIDE®

(nadolol-bendroflumethiazide tablets)

CORZIDE® 40/5
CORZIDE® 80/5
Nadolol-Bendroflumethiazide Tablets

DESCRIPTION: CORZIDE (Nadolol-Bendroflumethiazide Tablets) for oral administration combines two antihypertensive agents: CORGARD® (nadolol), a nonselective beta-adrenergic blocking agent, and NATURETIN® (bendroflumethiazide), a thiazide diuretic-antihypertensive. Formulations: 40 mg and 80 mg nadolol per tablet combined with 5 mg bendroflumethiazide.

CONTRAINDICATIONS: Nadolol — Bronchial asthma, sinus bradycardia and greater than first degree conduction block, cardiogenic shock, and overt cardiac failure (see WARNINGS). **Bendroflumethiazide** — Anuria, and in those with previous hypersensitivity to bendroflumethiazide or other sulfonamide-derived drugs.

WARNINGS: Nadolol — Cardiac Failure — Sympathetic stimulation may be a vital component supporting circulatory function in patients with congestive heart failure, and its inhibition by beta-blockade may precipitate more severe failure. Although beta-blockers should be avoided in overt congestive heart failure, if necessary, they can be used with caution in patients with a history of failure who are well compensated, usually with digitalis and diuretics. Beta-adrenergic blocking agents do not abolish the inotropic action of digitalis on heart muscle. IN PATIENTS WITHOUT A HISTORY OF HEART FAILURE, continued use of beta-blockers can, in some cases, lead to cardiac failure. Therefore, at the first sign or symptom of heart failure, digitalize and/or give diuretics, and closely observe response, or discontinue nadolol (gradually, if possible).

Exacerbation of Ischemic Heart Disease Following Abrupt Withdrawal — Hypersensitivity to catecholamines has been observed in patients withdrawn from beta-blocker therapy; exacerbation of angina and, in some cases, myocardial infarction have occurred after *abrupt* discontinuation of such therapy. When discontinuing chronic use of nadolol, particularly in patients with ischemic heart disease, gradually reduce dosage over a 1- to 2-week period and carefully monitor the patient. Reinstitute nadolol promptly (at least temporarily) and take other measures appropriate for management of unstable angina if angina markedly worsens or acute coronary insufficiency develops. Warn patients not to interrupt or discontinue therapy without physician's advice. Because coronary artery disease is common and may be unrecognized, it may be prudent not to discontinue nadolol therapy abruptly even in patients treated only for hypertension.

Nonallergic Bronchospasm (e.g., chronic bronchitis, emphysema) — PATIENTS WITH BRONCHOSPASTIC DISEASES SHOULD IN GENERAL NOT RECEIVE BETA-BLOCKERS. Administer nadolol with caution since it may block bronchodilation produced by endogenous or exogenous catecholamine stimulation of $beta_2$ receptors. **Major Surgery** — Because beta blockade impairs the ability of the heart to respond to reflex stimuli and may increase the risks of general anesthesia and surgical procedures, resulting in protracted hypotension or low cardiac output, it has generally been suggested that such therapy should be withdrawn several days prior to surgery. Recognition of the increased sensitivity to catecholamines of patients recently withdrawn from beta-blocker therapy, however, has made this recommendation controversial. If possible, withdraw beta-blockers well before surgery takes place. In emergency surgery, inform the anesthesiologist that the patient is on beta-blocker therapy. Use of beta-receptor agonists such as isoproterenol, dopamine, dobutamine, or levarterenol can reverse the effects of nadolol. Difficulty in restarting and maintaining the heart beat has also been reported with beta-adrenergic receptor blocking agents. **Diabetes and Hypoglycemia** — Beta-adrenergic blockade may prevent the appearance of premonitory signs and symptoms (e.g., tachycardia and blood pressure changes) of acute hypoglycemia. This is especially important with labile diabetics. Beta-blockade also reduces release of insulin in response to hyperglycemia; therefore, it may be necessary to adjust dose of antidiabetic drugs. **Thyrotoxicosis** — Beta-adrenergic blockade may mask certain clinical signs (e.g., tachycardia) of hyperthyroidism. To avoid abrupt withdrawal of beta-adrenergic blockade which might precipitate a thyroid storm, carefully manage patients suspected of developing thyrotoxicosis.

Bendroflumethiazide — Use with caution in severe renal disease. In patients with renal disease, azotemia may be precipitated. With impaired renal function, effects of the drug may be cumulative. Use with caution in impaired hepatic function or progressive liver disease, since minor alterations of fluid and electrolyte balance may precipitate hepatic coma. Sensitivity reactions may occur in patients with a history of allergy or bronchial asthma. Possibility of exacerbation or activation of systemic lupus erythematosus has been reported.

PRECAUTIONS: General — Nadolol — Use with caution in patients with impaired hepatic or renal function (see DOSAGE AND ADMINISTRATION).

Bendroflumethiazide — At appropriate intervals, perform serum electrolytes determination to detect possible electrolyte imbalance warning signs of which are dryness of mouth, thirst, weakness, lethargy, drowsiness, restlessness, muscle pains or cramps, muscular fatigue, hypotension, oliguria, tachycardia, and G.I. disturbances such as nausea and vomiting. Observe patients for clinical signs of fluid or electrolyte imbalance; namely, hyponatremia, hypochloremic alkalosis, hypokalemia. Serum and urine electrolyte determinations are particularly important when the patient is vomiting excessively or receiving parenteral fluids. Drugs such as digitalis may influence serum electrolytes. Hypokalemia may develop, especially with brisk diuresis, in presence of severe cirrhosis. Interference with adequate oral electrolyte intake will also contribute to hypokalemia. Response of the heart to toxic effects of digitalis can be exaggerated with hypokalemia. Use potassium supplements such as high potassium foods to avoid or treat hypokalemia. Any chloride deficit is generally mild and usually does not require specific therapy except under extraordinary circumstances (as in liver or renal disease). Dilutional hyponatremia may occur in edematous patients in hot weather; appropriate therapy is water restriction rather than salt administration except in rare instances when the hyponatremia is life threatening. In actual salt depletion, appropriate replacement is the therapy of choice.

Hyperuricemia may occur or frank gout may be precipitated in certain thiazide-treated patients. Latent diabetes mellitus may become manifest during thiazide therapy. Antihypertensive effects of bendroflumethiazide may be enhanced in the postsympathectomy patient.

Careful reappraisal of therapy and consideration given to withholding or stopping diuretic therapy is necessary if rising nonprotein nitrogen or BUN (indicative of progressive renal impairment) occurs. Thiazides may decrease serum PBI levels without signs of thyroid disturbance. Thiazides decrease calcium excretion. Pathologic changes in parathyroid gland with hypercalcemia and hypophosphatemia have been occasionally observed with prolonged therapy. Common complications of hyperparathyroidism have not been seen.

Information for Patients — Warn patients, especially those with evidence of coronary artery insufficiency, against interruption or discontinuation of nadolol without physician's advice. Although cardiac failure rarely occurs in properly selected patients, advise patients being treated with beta-adrenergic blocking agents to consult physician at the first sign or symptom of impending failure. Advise patients of proper course if dose inadvertently missed.

Laboratory Tests — Regularly monitor serum and urine electrolyte levels (see WARNINGS, *Bendroflumethiazide*, and PRECAUTIONS, *General, Bendroflumethiazide).*

Drug Interactions — Nadolol — When administered concurrently the following drugs may interact with beta-adrenergic blocking agents: **Anesthetics, general** — exaggeration of anesthetic-induced hypotension (see WARNINGS, *Nadolol, Major Surgery).* **Antidiabetic drugs (oral agents and insulin)** — hypoglycemia or hyperglycemia; adjust antidiabetic drug dosage accordingly (see WARNINGS, *Nadolol, Diabetes and Hypoglycemia).* **Catecholamine-depleting drugs (e.g., reserpine)** — additive effect; monitor closely for evidence of hypotension and/or excessive bradycardia.

Bendroflumethiazide — When administered concurrently the following drugs may interact with thiazide diuretics: **Alcohol, barbiturates, or narcotics** — may potentiate orthostatic hypotension. **Antidiabetic drugs (oral agents and insulin)** — thiazide-induced hyperglycemia may require adjustment of antidiabetic drug dosage. **Other antihypertensive drugs** — additive or potentiated effect. **Corticosteroids, ACTH** — intensified electrolyte depletion, particularly hypokalemia. **Ganglionic or peripheral adrenergic blocking drugs** — potentiated effect. **Preanesthetic and anesthetic agents** — effects may be potentiated; adjust dosage accordingly. **Pressor amines (e.g., norepinephrine)** — possible decrease response but not sufficient to preclude their use. **Skeletal muscle relaxants, nondepolarizing (e.g., tubocurarine)** — possible increased response.

Drug/Laboratory Test Interactions — Discontinue thiazides before tests for parathyroid function (see PRECAUTIONS, *General, Bendroflumethiazide).*

Carcinogenesis, Mutagenesis, Impairment of Fertility — Nadolol — In 1 to 2 years oral toxicologic studies in mice, rats, and dogs, nadolol did not produce significant toxic effects. In 2-year oral carcinogenic studies in rats and mice, nadolol did not produce neoplastic, preneoplastic, or nonneoplastic pathologic lesions. **Bendroflumethiazide** — Long-term studies in animals have not been performed.

Pregnancy — Teratogenic Effects — Nadolol — Category C. In animal reproduction studies with nadolol, evidence of embryo- and fetotoxicity was found in rabbits, but not in rats or hamsters, at doses 5 to 10 times greater (on a mg/kg basis) than the maximum indicated human dose; no teratogenic potential was seen in any of these species. There are no well-controlled studies in pregnant women; therefore, use nadolol in pregnant women only if potential benefit justifies potential risk to the fetus. **Bendroflumethiazide** — Category C. Animal reproduction studies have not been conducted. This drug's effect on the fetus when administered to a pregnant woman or its effect on reproductive capacity is not known. Bendroflumethiazide should be given to a pregnant woman only if clearly needed. **Nonteratogenic Effects** — Since thiazides cross the placental barrier and appear in cord blood, weigh anticipated benefit of the drug in pregnant women against possible hazards to the fetus; these hazards include fetal or neonatal jaundice, thrombocytopenia, and possibly other reactions which have occurred in adults.

Nursing Mothers — Both nadolol and bendroflumethiazide are excreted in human milk. Because of the potential for serious adverse reactions in nursing infants either discontinue nursing or discontinue therapy, taking into account the importance of CORZIDE (Nadolol-Bendroflumethiazide Tablets) to the mother.

Pediatric Use — Safety and effectiveness in children have not been established.

ADVERSE REACTIONS: Nadolol — Most adverse effects have been mild and transient and have rarely required nadolol withdrawal. **Cardiovascular** — Bradycardia with heart rates of less than 60 beats per minute occurs commonly, and heart rates below 40 beats per minute and/or symptomatic bradycardia were seen in about 2 of 100 patients. Symptoms of peripheral vascular insufficiency, usually of the Raynaud type, have occurred in approximately 2 of 100 patients. Cardiac failure, hypotension, and rhythm/conduction disturbances have each occurred in about 1 of 100 patients. Single instances of first degree and third degree heart block have been reported; intensification of AV block is a known effect of beta-blockers (see also CONTRAINDICATIONS, WARNINGS, and PRECAUTIONS). **Central Nervous System** — Dizziness or fatigue reported in approximately 2 of 100 patients; paresthesias, sedation, and change in behavior reported in approximately 6 of 1000 patients. **Respiratory** — Bronchospasm reported in approximately 1 of 1000 patients (see CONTRAINDICATIONS and WARNINGS). **Gastrointestinal** — Nausea, diarrhea, abdominal discomfort, constipation, vomiting, indigestion, anorexia, bloating, and flatulence each reported in 1 to 5 of 1000 patients. **Miscellaneous** — Each of the following reported in 1 to 5 of 1000 patients: rash; pruritus; headache; dry mouth, eyes, or skin; impotence or decreased libido; facial swelling; weight gain; slurred speech; cough; nasal stuffiness; sweating; tinnitus; blurred vision. Although relationship to drug usage is not clear, sleep disturbances have been reported. The oculomucocutaneous syndrome associated with practolol has not been reported with nadolol. The following adverse reactions may also occur: **Central Nervous System** — reversible mental depression progressing to catatonia; visual disturbances; hallucinations; an acute reversible syndrome characterized by disorientation for time and place, short-term memory loss; emotional lability with slightly clouded sensorium, decreased performance on neuropsychometrics. **Gastrointestinal** — mesenteric arterial thrombosis; ischemic colitis. **Hematologic** — agranulocytosis; thrombocytopenic or nonthrombocytopenic purpura. **Allergic** — fever combined with aching and sore throat; laryngospasm; respiratory distress. **Miscellaneous** — reversible alopecia; Peyronie's disease; erythematous rash; arterial insufficiency.

Bendroflumethiazide — Gastrointestinal System — anorexia, gastric irritation, nausea, vomiting, cramping, diarrhea, constipation, jaundice (intrahepatic cholestatic jaundice), pancreatitis. **Central Nervous System** — dizziness, vertigo, paresthesia, headache, xanthopsia. **Hematologic** — leukopenia, agranulocytosis, thrombocytopenia, aplastic anemia. **Dermatologic-Hypersensitivity** — purpura, photosensitivity, rash, urticaria, necrotizing angiitis (vasculitis, cutaneous vasculitis). **Cardiovascular** — orthostatic hypotension may occur. **Other** — hyperglycemia, glycosuria, occasional metabolic acidosis in diabetics, hyperuricemia, allergic glomerulonephritis, muscle spasm, weakness, restlessness. Whenever adverse reactions are moderate or severe, thiazide dosage should be reduced or therapy withdrawn.

OVERDOSAGE: Nadolol may cause excessive bradycardia, cardiac failure, hypotension, or bronchospasm if overdosed. Overdosage of thiazides may cause lethargy, which may progress to coma within a few hours, with minimal depression of respiration and cardiovascular function and without evidence of serum electrolyte changes or dehydration. Gastrointestinal irritation and hypermotility may occur. Transitory increase in BUN and serum electrolyte changes may occur, especially in patients with renal impairment.

Treatment — Nadolol can be removed from the general circulation by hemodialysis. In determining duration of corrective therapy, take note of the long duration of the effect of nadolol. In addition to gastric lavage, employ the following measures, as appropriate. **Excessive Bradycardia** — Administer atropine (0.25 to 1.0 mg). If there is no response to vagal blockade, administer isoproterenol cautiously. **Cardiac Failure** — Administer a digitalis glycoside and diuretic. It has been reported that glucagon may also be useful in this situation. **Hypotension** — Administer vasopressors, e.g., epinephrine or levarterenol. (There is evidence that epinephrine may be the drug of choice.) **Bronchospasm** — Administer a $beta_2$-stimulating agent and/or a theophylline derivative. **Stupor or Coma** — Supportive therapy as warranted. **Gastrointestinal Effects** — Symptomatic treatment as needed. **BUN and/or Serum Electrolyte Abnormalities** — Institute supportive measures as required to maintain hydration, electrolyte balance, respiration, and cardiovascular and renal function.

DOSAGE AND ADMINISTRATION: DOSAGE MUST BE INDIVIDUALIZED. Patients with renal failure require adjustment in dosing interval; see package insert for dosage in these patients.

Consult package insert before prescribing CORZIDE (Nadolol-Bendroflumethiazide Tablets).

HOW SUPPLIED: Available as scored tablets containing 40 mg nadolol combined with 5 mg bendroflumethiazide and 80 mg nadolol combined with 5 mg bendroflumethiazide in bottles of 100.

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505-502 Issued: March 1985

BALANCED CALCIUM CHANNEL BLOCKADE!



Low incidence of side effects
CARDIZEM® (diltiazem HCl) produces an incidence of adverse reactions not greater than that reported with placebo therapy, thus contributing to the patient's sense of well-being.

*Cardizem is indicated in the treatment of angina pectoris due to coronary artery spasm and in the management of chronic stable angina (classic effort-associated angina) in patients who cannot tolerate therapy with beta-blockers and/or nitrates or who remain symptomatic despite adequate doses of these agents.

References:
1. Strauss WE, McIntyre KM, Parisi AF, et al: Safety and efficacy of diltiazem hydrochloride for the treatment of stable angina pectoris: Report of a cooperative clinical trial. Am J Cardiol 49:560-566, 1982.
2. Pool PE, Seagren SC, Bonanno JA, et al: The treatment of exercise-inducible chronic stable angina with diltiazem: Effect on treadmill exercise. Chest 78 (July suppl):234-238, 1980.

Reduces angina attack frequency*
42% to 46% decrease reported in multicenter study.[1]

Increases exercise tolerance*
In Bruce exercise test,[2] control patients averaged 8.0 minutes to onset of pain; Cardizem patients averaged 9.8 minutes ($P<.005$).

CARDIZEM®
(diltiazem HCl)

THE BALANCED CALCIUM CHANNEL BLOCKER

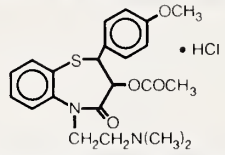
Please see full prescribing information on following page.

PROFESSIONAL USE INFORMATION

cardizem®
(diltiazem HCl)
30 mg and 60 mg tablets

DESCRIPTION

CARDIZEM® (diltiazem hydrochloride) is a calcium ion influx inhibitor (slow channel blocker or calcium antagonist). Chemically, diltiazem hydrochloride is 1,5-Benzothiazepin-4(5H)one,3-(acetyloxy) -5-[2-(dimethylamino)ethyl]-2,3-dihydro-2-(4-methoxyphenyl)-, monohydrochloride,(+) -cis-. The chemical structure is:



Diltiazem hydrochloride is a white to off-white crystalline powder with a bitter taste. It is soluble in water, methanol, and chloroform. It has a molecular weight of 450.98. Each tablet of CARDIZEM contains either 30 mg or 60 mg diltiazem hydrochloride for oral administration.

CLINICAL PHARMACOLOGY

The therapeutic benefits achieved with CARDIZEM are believed to be related to its ability to inhibit the influx of calcium ions during membrane depolarization of cardiac and vascular smooth muscle.

Mechanisms of Action. Although precise mechanisms of its antianginal actions are still being delineated, CARDIZEM is believed to act in the following ways:

1. Angina Due to Coronary Artery Spasm: CARDIZEM has been shown to be a potent dilator of coronary arteries both epicardial and subendocardial. Spontaneous and ergonovine-induced coronary artery spasm are inhibited by CARDIZEM.
2. Exertional Angina: CARDIZEM has been shown to produce increases in exercise tolerance, probably due to its ability to reduce myocardial oxygen demand. This is accomplished via reductions in heart rate and systemic blood pressure at submaximal and maximal exercise work loads.

In animal models, diltiazem interferes with the slow inward (depolarizing) current in excitable tissue. It causes excitation-contraction uncoupling in various myocardial tissues without changes in the configuration of the action potential. Diltiazem produces relaxation of coronary vascular smooth muscle and dilation of both large and small coronary arteries at drug levels which cause little or no negative inotropic effect. The resultant increases in coronary blood flow (epicardial and subendocardial) occur in ischemic and nonischemic models and are accompanied by dose-dependent decreases in systemic blood pressure and decreases in peripheral resistance.

Hemodynamic and Electrophysiologic Effects. Like other calcium antagonists, diltiazem decreases sinoatrial and atrioventricular conduction in isolated tissues and has a negative inotropic effect in isolated preparations. In the intact animal, prolongation of the AH interval can be seen at higher doses.

In man, diltiazem prevents spontaneous and ergonovine-provoked coronary artery spasm. It causes a decrease in peripheral vascular resistance and a modest fall in blood pressure and, in exercise tolerance studies in patients with ischemic heart disease, reduces the heart rate-blood pressure product for any given work load. Studies to date, primarily in patients with good ventricular function, have not revealed evidence of a negative inotropic effect; cardiac output, ejection fraction, and left ventricular end diastolic pressure have not been affected. There are as yet few data on the interaction of diltiazem and beta-blockers. Resting heart rate is usually unchanged or slightly reduced by diltiazem.

Intravenous diltiazem in doses of 20 mg prolongs AH conduction time and AV node functional and effective refractory periods approximately 20%. In a study involving single oral doses of 300 mg of CARDIZEM in six normal volunteers, the average maximum PR prolongation was 14% with no instances of greater than first-degree AV block. Diltiazem-associated prolongation of the AH interval is not more pronounced in patients with first-degree heart block. In patients with sick sinus syndrome, diltiazem significantly prolongs sinus cycle length (up to 50% in some cases).

Chronic oral administration of CARDIZEM in doses of up to 240 mg/day has resulted in small increases in PR interval, but has not usually produced abnormal prolongation. There were, however, three instances of second-degree AV block and one instance of third-degree AV block in a group of 959 chronically treated patients.

Pharmacokinetics and Metabolism. Diltiazem is absorbed from the tablet formulation to about 80% of a reference capsule and is subject to an extensive first-pass effect, giving an absolute bioavailability (compared to intravenous dosing) of about 40%. CARDIZEM undergoes extensive hepatic metabolism in which 2% to 4% of the unchanged drug appears in the urine. In vitro binding studies show CARDIZEM is 70% to 80% bound to plasma proteins. Competitive ligand binding studies have also shown CARDIZEM binding is not altered by therapeutic concentrations of digoxin, hydrochlorothiazide, phenylbutazone, propranolol, salicylic acid, or warfarin. Single oral doses of 30 to 120 mg of CARDIZEM result in detectable plasma levels within 30 to 60 minutes and peak plasma levels two to three hours after drug administration. The plasma elimination half-life following single or multiple drug administration is approximately 3.5 hours. Desacetyl diltiazem is also present in the plasma at levels of 10% to 20% of the parent drug and is 25% to 50% as potent a coronary vasodilator as diltiazem. Therapeutic blood levels of CARDIZEM appear to be in the range of 50 to 200 ng/ml. There is a departure from dose-linearity when single doses above 60 mg are given; a 120-mg dose gave blood levels three times that of the 60-mg dose. There is no information about the effect of renal or hepatic impairment on excretion or metabolism of diltiazem.

INDICATIONS AND USAGE

1. **Angina Pectoris Due to Coronary Artery Spasm.** CARDIZEM is indicated in the treatment of angina pectoris due to coronary artery spasm. CARDIZEM has been shown effective in the treatment of spontaneous coronary artery spasm presenting as Prinzmetal's variant angina (resting angina with ST-segment elevation occurring during attacks).
2. **Chronic Stable Angina (Classic Effort-Associated Angina).** CARDIZEM is indicated in the management of chronic stable angina. CARDIZEM has been effective in controlled trials in reducing angina frequency and increasing exercise tolerance.

There are no controlled studies of the effectiveness of the concomitant use of diltiazem and beta-blockers or of the safety of this combination in patients with impaired ventricular function or conduction abnormalities.

CONTRAINDICATIONS

CARDIZEM is contraindicated in (1) patients with sick sinus syndrome except in the presence of a functioning ventricular pacemaker, (2) patients with second- or third-degree AV block except in the presence of a functioning ventricular pacemaker, and (3) patients with hypotension (less than 90 mm Hg systolic).

WARNINGS

1. **Cardiac Conduction.** CARDIZEM prolongs AV node refractory periods without significantly prolonging sinus node recovery time, except in patients with sick sinus syndrome. This effect may rarely result in abnormally slow heart rates (particularly in patients with sick sinus syndrome) or second- or third-degree AV block (six of 1243 patients for 0.48%). Concomitant use of diltiazem with beta-blockers or digitalis may result in additive effects on cardiac conduction. A patient with Prinzmetal's angina developed periods of asystole (2 to 5 seconds) after a single dose of 60 mg of diltiazem.
2. **Congestive Heart Failure.** Although diltiazem has a negative inotropic effect in isolated animal tissue preparations, hemodynamic studies in humans with normal ventricular function have not shown a reduction in cardiac index nor consistent negative effects on contractility (dp/dt). Experience with the use of CARDIZEM alone or in combination with beta-blockers in patients with impaired ventricular function is very limited. Caution should be exercised when using the drug in such patients.
3. **Hypotension.** Decreases in blood pressure associated with CARDIZEM therapy may occasionally result in symptomatic hypotension.
4. **Acute Hepatic Injury.** In rare instances, patients receiving CARDIZEM have exhibited reversible acute hepatic injury as evidenced by moderate to extreme elevations of liver enzymes. (See PRECAUTIONS and ADVERSE REACTIONS.)

PRECAUTIONS

General. CARDIZEM (diltiazem hydrochloride) is extensively metabolized by the liver and excreted by the kidneys and in bile. As with any new drug given over prolonged periods, laboratory parameters should be monitored at regular intervals. The drug should be used with caution in patients with impaired renal or hepatic function. In subacute and chronic dog and rat studies designed to produce toxicity, high doses of diltiazem were associated with hepatic damage. In special subacute hepatic studies, oral doses of 125 mg/kg and higher in rats were associated with histological changes in the liver which were reversible when the drug was discontinued. In dogs, doses of 20 mg/kg were also associated with hepatic changes; however, these changes were reversible with continued dosing.

Drug Interaction. Pharmacologic studies indicate that there may be additive effects in prolonging AV conduction when using beta-blockers or digitalis concomitantly with CARDIZEM. (See WARNINGS).

Controlled and uncontrolled domestic studies suggest that concomitant use of CARDIZEM and beta-blockers or digitalis is usually well tolerated. Available data are not sufficient, however, to predict the effects of concomitant treatment, particularly in patients with left ventricular dysfunction or cardiac conduction abnormalities. In healthy volunteers, diltiazem has been shown to increase serum digoxin levels up to 20%.

Carcinogenesis, Mutagenesis, Impairment of Fertility. A 24-month study in rats and a 21-month study in mice showed no evidence of carcinogenicity. There was also no mutagenic response in in vitro bacterial tests. No intrinsic effect on fertility was observed in rats.

Pregnancy. Category C. Reproduction studies have been conducted in mice, rats, and rabbits. Administration of doses ranging from five to ten times greater (on a mg/kg basis) than the daily recommended therapeutic dose has resulted in embryo and fetal lethality. These doses, in some studies, have been reported to cause skeletal abnormalities. In the perinatal/postnatal studies, there was some reduction in early individual pup weights and survival rates. There was an increased incidence of stillbirths at doses of 20 times the human dose or greater.

There are no well-controlled studies in pregnant women; therefore, use CARDIZEM in pregnant women only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers. It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, exercise caution when CARDIZEM is administered to a nursing woman if the drug's benefits are thought to outweigh its potential risks in this situation.

Pediatric Use. Safety and effectiveness in children have not been established.

ADVERSE REACTIONS

Serious adverse reactions have been rare in studies carried out to date, but it should be recognized that patients with impaired ventricular function and cardiac conduction abnormalities have usually been excluded.

In domestic placebo-controlled trials, the incidence of adverse reactions reported during CARDIZEM therapy was not greater than that reported during placebo therapy.

The following represent occurrences observed in clinical studies which can be at least reasonably associated with the pharmacology of calcium influx inhibition. In many cases, the relationship to CARDIZEM has not been established. The most common occurrences, as well as their frequency of presentation, are: edema (2.4%), headache (2.1%), nausea (1.9%), dizziness (1.5%), rash (1.3%), asthenia (1.2%), AV block (1.1%). In addition, the following events were reported infrequently (less than 1%) with the order of presentation corresponding to the relative frequency of occurrence.

Cardiovascular:	Flushing, arrhythmia, hypotension, bradycardia, palpitations, congestive heart failure, syncope.
Nervous System:	Paresthesia, nervousness, somnolence, tremor, insomnia, hallucinations, and amnesia.
Gastrointestinal:	Constipation, dyspepsia, diarrhea, vomiting, mild elevations of alkaline phosphatase, SGOT, SGPT, and LDH.
Dermatologic:	Pruritus, petechiae, urticaria, photosensitivity.
Other:	Polyuria, nocturia.

The following additional experiences have been noted:

A patient with Prinzmetal's angina experiencing episodes of vasospastic angina developed periods of transient asymptomatic asystole approximately five hours after receiving a single 60-mg dose of CARDIZEM.

The following postmarketing events have been reported infrequently in patients receiving CARDIZEM: erythema multiforme; leukopenia; and extreme elevations of alkaline phosphatase, SGOT, SGPT, LDH, and CPK. However, a definitive cause and effect between these events and CARDIZEM therapy is yet to be established.

OVERDOSAGE OR EXAGGERATED RESPONSE

Overdosage experience with oral diltiazem has been limited. Single oral doses of 300 mg of CARDIZEM have been well tolerated by healthy volunteers. In the event of overdosage or exaggerated response, appropriate supportive measures should be employed in addition to gastric lavage. The following measures may be considered:

Bradycardia	Administer atropine (0.60 to 1.0 mg). If there is no response to vagal blockade, administer isoproterenol cautiously.
High-Degree AV Block	Treat as for bradycardia above. Fixed high-degree AV block should be treated with cardiac pacing.
Cardiac Failure	Administer inotropic agents (isoproterenol, dopamine, or dobutamine) and diuretics.
Hypotension	Vasopressors (eg, dopamine or levarterenol bitartrate).

Actual treatment and dosage should depend on the severity of the clinical situation and the judgment and experience of the treating physician.

The oral LD_{50}'s in mice and rats range from 415 to 740 mg/kg and from 560 to 810 mg/kg, respectively. The intravenous LD_{50}'s in these species were 60 and 38 mg/kg, respectively. The oral LD_{50} in dogs is considered to be in excess of 50 mg/kg, while lethality was seen in monkeys at 360 mg/kg. The toxic dose in man is not known, but blood levels in excess of 800 ng/ml have not been associated with toxicity.

DOSAGE AND ADMINISTRATION

Exertional Angina Pectoris Due to Atherosclerotic Coronary Artery Disease or Angina Pectoris at Rest Due to Coronary Artery Spasm. Dosage must be adjusted to each patient's needs. Starting with 30 mg four times daily, before meals and at bedtime, dosage should be increased gradually (given in divided doses three or four times daily) at one- to two-day intervals until optimum response is obtained. Although individual patients may respond to any dosage level, the average optimum dosage range appears to be 180 to 240 mg/day. There are no available data concerning dosage requirements in patients with impaired renal or hepatic function. If the drug must be used in such patients, titration should be carried out with particular caution.

Concomitant Use With Other Antianginal Agents:

1. **Sublingual NTG** may be taken as required to abort acute anginal attacks during CARDIZEM therapy.
2. **Prophylactic Nitrate Therapy**—CARDIZEM may be safely coadministered with short- and long-acting nitrates, but there have been no controlled studies to evaluate the antianginal effectiveness of this combination.
3. **Beta-blockers.** (See WARNINGS and PRECAUTIONS.)

HOW SUPPLIED

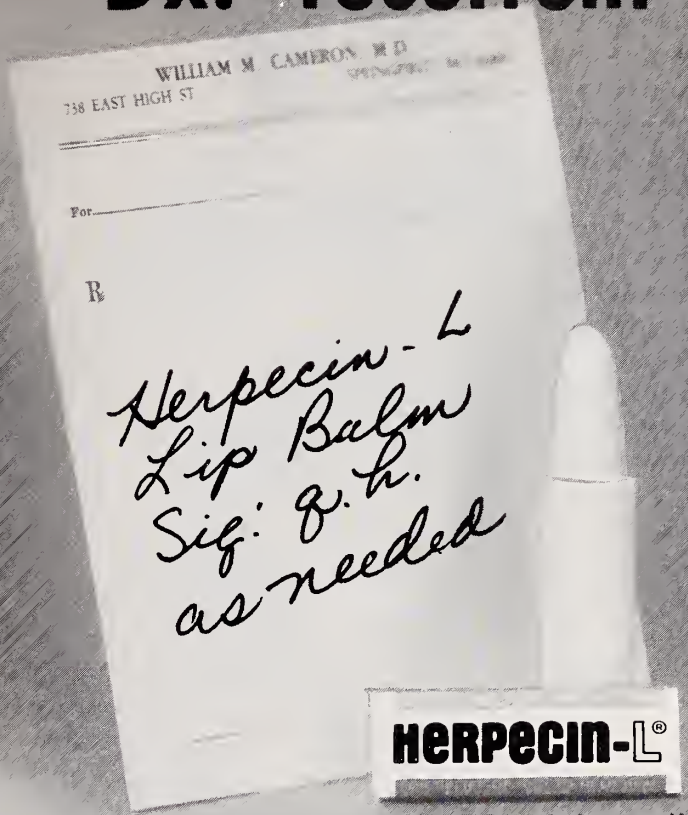
Cardizem 30-mg tablets are supplied in bottles of 100 (NDC 0088-1771-47) and in Unit Dose Identification Paks of 100 (NDC 0088-1771-49). Each green tablet is engraved with MARION on one side and 1771 engraved on the other. CARDIZEM 60-mg scored tablets are supplied in bottles of 100 (NDC 0088-1772-47) and in Unit Dose Identification Paks of 100 (NDC 0088-1772-49). Each yellow tablet is engraved with MARION on one side and 1772 on the other.

Issued 4/1/84

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Dx: recurrent herpes labialis



"HERPECIN-L is my **treatment of choice** for perioral herpes." GP, NY

"HERPECIN-L appears to actually **prevent** the blisters . . . used **soon enough.**" DDS, MN

"HERPECIN-L®. . . a **conservative approach** with **low risk/high benefits.**" MD, FL

"Used at **prodromal symptoms** . . . blisters **never formed** . . . remarkable." DH, MA

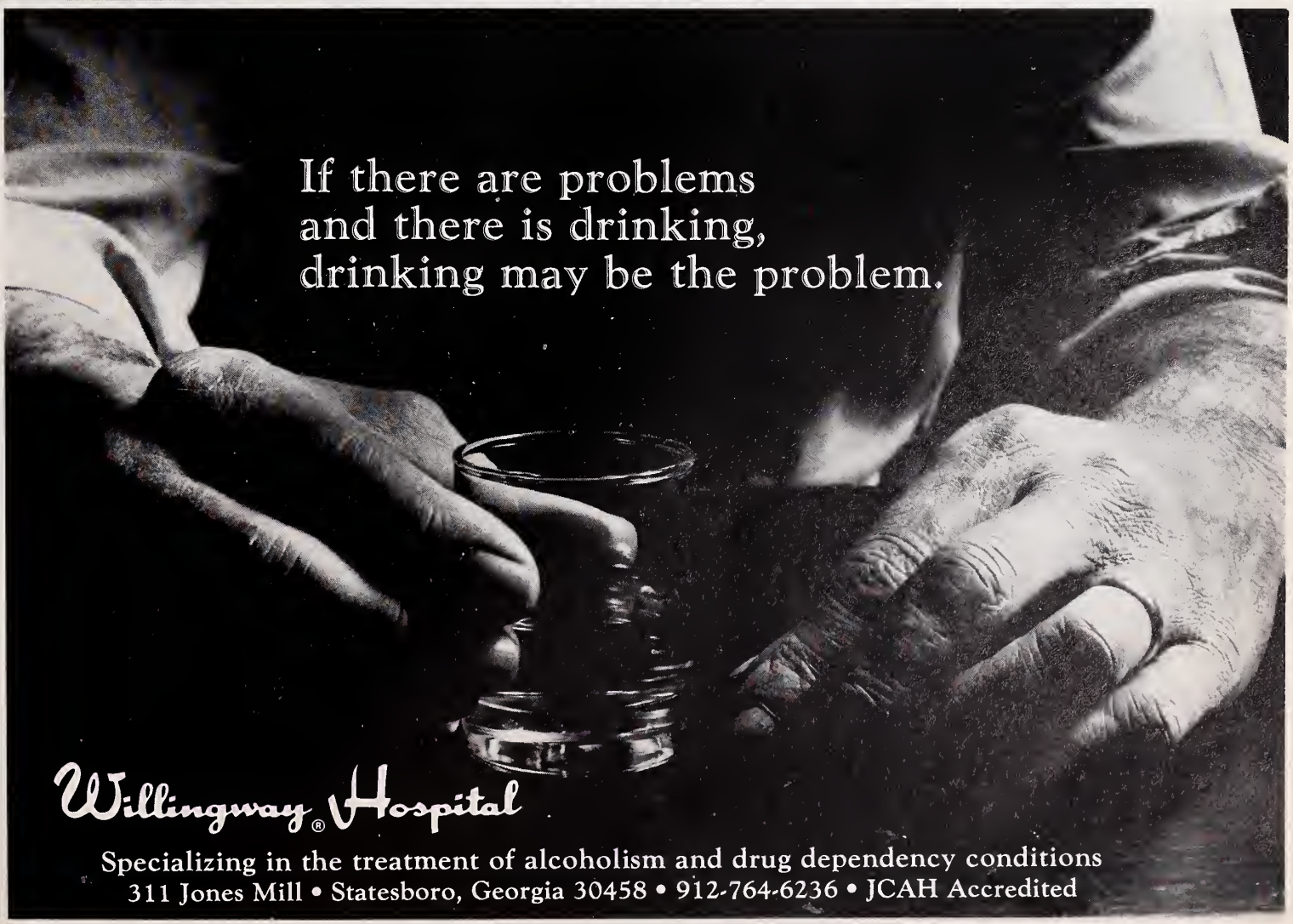
"(In clinical trials) . . . **response** was **dramatic. HERPECIN-L** . . proven **far superior.**" DDS, PA

"All patients claimed **shorter duration** . . . at **prodromal symptoms** . . . HERPECIN-L **averted** the attacks." MD, AK

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GEORGIA MEDICINE TODAY



Munchausen's with a new twist

How do you simulate "asystolic intervals" during Holter monitoring? All it takes is a twist of the wrist, found Drs. C. Craig Mitchell and Martin J. Frank of the Medical College of Georgia.[1] A 24-year-old woman was referred to the cardiology service with ventricular premature beats, atypical chest pain and recurrent syncope. Medication appeared to control the arrhythmia, but repeated periods of monitoring showed frequent episodes of "asystole" with frequent bizarre "escape" beats.

After insertion of a permanent pacemaker, the "asystolic" episodes initially ceased but later recurred. Erratic patient behavior and close examination of the Holter strips suggested that the bradycardia was probably artifactual. While pseudobradycardia can be caused by component malfunction, the evidence pointed to patient tampering. A quick 20-degree rotation of the recording tape reel was found to produce similar ECG patterns.

This was probably the first reported case of apparent patient-induced pseudobradycardia during Holter monitoring, and it resulted in unnecessary insertion of a permanent pacemaker. Seal the record case, suggest Drs. Mitchell and Frank, if you're trying to prevent "electronic Munchausen's syndrome."

Cervical smoke screen

Cigarette smoking is significantly associated with dysplasia and carcinoma *in situ* of the uterine cervix, according to a case-control study headed by Dr. Edwin Trevathan[2] at Emory University. Among women who smoked, the relative risk of cervical cancer rose to 3.6. Even more alarmingly, the relative risk to women with 12 or more pack-years of exposure rose to 12.7. Further, there was evidence that women who began smoking as early teenagers faced even greater risk. It was hypothesized that the cervical mucosa might be exposed to carcinogens in cigarette smoke that are absorbed into the blood and then secreted by the epithelium.

A *JAMA* editorial comments: "As the Surgeon General's report notes, cigarette smoking is the single largest cause of disease and premature death in this country. We can now add cervical cancer to the list of tobacco-caused diseases."[3]

About "herbal" prednisone and indomethacin

Dr. Gary E. Myerson of Atlanta reports a herbal medication called *chuifong toukuwan,* ordered by mail from Hong Kong, that was used by rheumatoid arthritis patients and caused conditions ranging from acute flares, lesions and Cushingoid appearance to arrhythmias and depression.[4] Three samples analyzed at Georgia Tech were found to contain prednisone and indomethacin, and one included a high concentration of lead. As they say in Georgia, *caveat emptor.*

References: 1. Mitchell CC, Frank MJ: *JAMA 248:*469-470, Jul 23/30, 1982 **2.** Trevathan E, *et al: JAMA 250:*499-502, Jul 22/29, 1983. **3.** Austin DF: *JAMA 250:*516-517, Jul 22/29, 1983. **4.** Medical News. *JAMA 248:*623, Aug 13, 1982.

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ROCHE®

TODAY: FOR THE PATIENT WITH MIXED DEPRESSION AND ANXIETY

A rational approach, combining
- The standard antidepressant: amitriptyline
- The proven anxiolytic action of Librium® (chlordiazepoxide HCl/Roche) Ⓘⓥ

Marked improvement often occurs as early as the first week

Headache, insomnia or GI upsets associated with mixed depression and anxiety often respond quickly

Feeling better, patients feel encouraged to stay the course—therefore, fewer dropouts: $P = .006$ compared to amitriptyline*

Convenient single *h.s.* dosing sufficient in some patients; helps patients with mixed depression and anxiety sleep through the night. Patients should be cautioned about the combined effects of Limbitrol with alcohol and other CNS depressants, and about activities requiring complete mental alertness such as operating machinery or driving a car.

In moderate depression and anxiety

IN PLACE OF LIMBITROL 5-12.5 WRITE: **Limbitrol®**

Each tablet contains 5 mg chlordiazepoxide and 12.5 mg amitriptyline (as the hydrochloride salt) Ⓘⓥ

IN PLACE OF LIMBITROL 10-25 WRITE: **Limbitrol® DS**

Each tablet contains 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt) Ⓘⓥ

Easier to remember... easier to prescribe

*Feighner JP, *et al: Psychopharmacology 61*:217-225, Mar 22, 1979.

Please see summary of product information on following page.

LIMBITROL® Ⓥ Tranquilizer-Antidepressant

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Relief of moderate to severe depression associated with moderate to severe anxiety.

Contraindications: Known hypersensitivity to benzodiazepines or tricyclic antidepressants. Do not use with monoamine oxidase (MAO) inhibitors or within 14 days following discontinuation of MAO inhibitors since hyperpyretic crises, severe convulsions and deaths have occurred with concomitant use; then initiate cautiously, gradually increasing dosage until optimal response is achieved. Contraindicated during acute recovery phase following myocardial infarction.

Warnings: Use with great care in patients with history of urinary retention or angle-closure glaucoma. Severe constipation may occur in patients taking tricyclic antidepressants and anticholinergic-type drugs. Closely supervise cardiovascular patients. (Arrhythmias, sinus tachycardia and prolongation of conduction time reported with use of tricyclic antidepressants, especially high doses. Myocardial infarction and stroke reported with use of this class of drugs.) Caution patients about possible combined effects with alcohol and other CNS depressants and against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving).

Usage in Pregnancy: **Use of minor tranquilizers during the first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

Since physical and psychological dependence to chlordiazepoxide have been reported rarely, use caution in administering Limbitrol to addiction-prone individuals or those who might increase dosage; withdrawal symptoms following discontinuation of either component alone have been reported (nausea, headache and malaise for amitriptyline; symptoms [including convulsions] similar to those of barbiturate withdrawal for chlordiazepoxide).

Precautions: Use with caution in patients with a history of seizures, in hyperthyroid patients or those on thyroid medication, and in patients with impaired renal or hepatic function. Because of the possibility of suicide in depressed patients, do not permit easy access to large quantities in these patients. Periodic liver function tests and blood counts are recommended during prolonged treatment. Amitriptyline component may block action of guanethidine or similar antihypertensives. Concomitant use with other psychotropic drugs has not been evaluated; sedative effects may be additive. Discontinue several days before surgery. Limit concomitant administration of ECT to essential treatment. See Warnings for precautions about pregnancy. Limbitrol should not be taken during the nursing period. Not recommended in children under 12. In the elderly and debilitated, limit to smallest effective dosage to preclude ataxia, oversedation, confusion or anticholinergic effects.

Adverse Reactions: Most frequently reported are those associated with either component alone: drowsiness, dry mouth, constipation, blurred vision, dizziness and bloating. Less frequently occurring reactions include vivid dreams, impotence, tremor, confusion and nasal congestion. Many depressive symptoms including anorexia, fatigue, weakness, restlessness and lethargy have been reported as side effects of both Limbitrol and amitriptyline. Granulocytopenia, jaundice and hepatic dysfunction have been observed rarely.

The following list includes adverse reactions not reported with Limbitrol but requiring consideration because they have been reported with one or both components or closely related drugs:

Cardiovascular: Hypotension, hypertension, tachycardia, palpitations, myocardial infarction, arrhythmias, heart block, stroke.

Psychiatric: Euphoria, apprehension, poor concentration, delusions, hallucinations, hypomania and increased or decreased libido.

Neurologic: Incoordination, ataxia, numbness, tingling and paresthesias of the extremities, extrapyramidal symptoms, syncope, changes in EEG patterns.

Anticholinergic: Disturbance of accommodation, paralytic ileus, urinary retention, dilatation of urinary tract.

Allergic: Skin rash, urticaria, photosensitization, edema of face and tongue, pruritus.

Hematologic: Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia.

Gastrointestinal: Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, black tongue.

Endocrine: Testicular swelling and gynecomastia in the male, breast enlargement, galactorrhea and minor menstrual irregularities in the female, elevation and lowering of blood sugar levels, and syndrome of inappropriate ADH (antidiuretic hormone) secretion.

Other: Headache, weight gain or loss, increased perspiration, urinary frequency, mydriasis, jaundice, alopecia, parotid swelling.

Overdosage: Immediately hospitalize patient suspected of having taken an overdose. Treatment is symptomatic and supportive. I.V. administration of 1 to 3 mg physostigmine salicylate has been reported to reverse the symptoms of amitriptyline poisoning. See complete product information for manifestation and treatment.

Dosage: Individualize according to symptom severity and patient response. Reduce to smallest effective dosage when satisfactory response is obtained. Larger portion of daily dose may be taken at bedtime. Single *h.s.* dose may suffice for some patients. Lower dosages are recommended for the elderly.

Limbitrol DS (double strength) Tablets, initial dosage of three or four tablets daily in divided doses, increased up to six tablets or decreased to two tablets daily as required. Limbitrol Tablets, initial dosage of three or four tablets daily in divided doses, for patients who do not tolerate higher doses.

How Supplied: *Double strength (DS) Tablets,* white, film-coated, each containing 10 mg chlordiazepoxide and 25 mg amitriptyline (as the hydrochloride salt), and *Tablets,* blue, film-coated, each containing 5 mg chlordiozepoxide and 12.5 mg amitriptyline (as the hydrochloride salt)—bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 50.

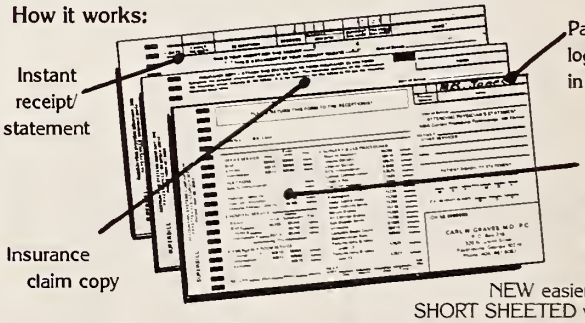
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—*President's Letter*



Swan Song

THIS PAST YEAR has been one of challenge and opportunity, of frustration and shortcomings, of awesome responsibility, and time-consuming hard work. But it has also been one of excitement and exhilaration and often of just plain fun. It certainly has not been a boring year.

A year ago we faced many challenges, some of which were enumerated on this page. These have been met with varying degrees of success . . . none as well as we would have liked, but that's what keeps us working and trying harder. A detailed report will be made to the House of Delegates this month.

As the year has progressed, I have developed a deep gratitude for the guidance and support of your elected leadership on the Executive Committee. As we have worked on problems during the year, we have tried to keep the best interests of the membership (and ultimately, the patients whom we serve) uppermost in our minds.

One has to have "seen it with my own eyes" to really appreciate the degree to which the MAG is involved in all aspects of the medical profession in Georgia, and indeed, the United States. There are many physicians serving on committees who actively work in their spheres of interest and influence, all in our behalf, and all without pay. The professional staff does an excellent job of guiding and coordinating our efforts. I am convinced that any group of people needs a strong organization to help it be more effective. It is my observation after this year as your president that the MAG is providing highly important services to every citizen of Georgia as it seeks to "promote the science and art of medicine and the betterment of public health," which objective is spelled out in our Constitution. I firmly believe that if every physician in Georgia knew the real worth of this organization to his very livelihood, each one would become a member of the MAG without hesitation and more members would become involved in its affairs and activities.

The privilege of having served as president of the Medical Association of Georgia is one which I will cherish for a lifetime.

S. William Clark

S. William Clark, Jr., M.D.

Incidental Intelligence . . .

Professional Liability High on States' Agendas

Nineteen states expect to consider medical malpractice legislation in 1985 and seven states see this as one of the top three health issues they will face this year, according to a new survey by the National Conference of State Legislatures.

The survey ranked care of the medically indigent as the top issue in the states in 1985 and it found several other issues — including long term care and Medicaid reimbursement of physicians and hospitals — that outscored malpractice in terms of the number of states that saw it as a major issue.

Nevertheless, an NSCL official said he believes that medical malpractice "will be on the platter in every state" in the country.

All told, the states anticipate deliberations on about 39 malpractice bills. Thirteen legislatures are likely to consider general limits on malpractice awards and a bill introduced in Colorado would limit malpractice recoveries whenever a second opinion had been obtained. Thirteen states will consider placing ceilings on lawyers fees while 12 may require arbitration of medical malpractice suits. Colorado, Delaware, Florida, Kansas, Michigan, Utah, and Wisconsin ranked malpractice as one of the top three issues the legislatures would face in 1985.

The NSCL survey, which was conducted in November and December of 1984, found that states will consider more than 585 health care cost containment bills in 1985. Forty states responded to the survey.

State Medicaid programs and physician services to these patients also will absorb a great deal of the legislators' attention. Thirteen states identified Medicaid hospital and physician care as top priorities in 1985. Eleven states are expected to consider requiring or encouraging Medicaid recipients to get all their care from a primary care MD. Six (Alabama, California, Colorado, Indiana, Minnesota, and Oregon) are likely to debate proposals that would require Medicaid patients to go only to physicians under contract to the state. Six states will probably consider contracting with hospitals for services to Medicaid patients. Eight may require prior authorization for all hospital care.

Medical Education Cuts Attacked

Medical educators and students say they are "outraged" by a Reagan Administration budget proposal that would "wipe out" federal support of health professions' education and congressional health staffers have told the Administration that the proposal is "politically impossible."

The widely-predicted provision in the just-released fiscal 1986 budget plan followed a Presidential veto of health manpower reauthorization legislation late last fall after Congress had adjourned. Conventional wisdom is that the veto might otherwise have been overridden, and committees with manpower jurisdiction are preparing to reintroduce manpower legislation.

The educational assistance programs the President seeks to terminate include grants for special training programs, assistance to financially disadvantaged and minority students and schools, and nurse training.

No new federal capital would be allocated for Health Professions Student Loans (HPSL), but an estimated $67 million in revolving loan funds administered through 1,400 health professions and nursing schools would remain in circulation. The current $250 million ceiling on Health Education Assistance Loans (HEAL) would be lowered to $100 million.

The budget proposal also would end the National Health Service Corps scholarship program and would reduce funds for NHSC members already in underserved communities by about a third — from $75 million in 1985 to $50 million in FY86. The budget cuts occur despite an expected increase in the number of NHSC practitioners in the field — from 3102 in 1985 to 3507 in 1986. Federal officials say the funding shortfall can be made up by continuing efforts to encourage more NHSC scholars to repay their obligation through private practice rather than as federal corpsmen.

In other manpower budget provisions, the maternal and child health block grant would be funded at its 1985 level of $478 million; funding for the Indian Health Service would be reduced by nearly $100 million; health planning funds would be eliminated and federal staff associated with manpower programs would be reduced by the equivalent of about 1000 full-time positions; a primary care block grant that currently offers an alternative to categorical funding for community health centers would be expanded and "probably" made mandatory.

In justifying the decision to end "federal subsidies" to the health professions, the budget documents point to a "projected national surplus" of physicians and nurses.

Representatives of the medical profession said, however, that the cuts in professional training support are exacerbated by proposed restrictions on guaranteed student loans for all students of higher education. The real impact of the proposal will be to influence the makeup of the medical student population and specialty and geographic distribution rather than to curtail the overall physician supply, they added. James H. Sammons, MD, Executive Vice President of the American Medical Association, said the cuts could "endanger the quality of health care in the United States."

Organ Task Force Formed

The new Task Force on Organ Transplantation, established by the Department of Health and Human Services this month, will begin reviewing the nation's organ transplant network in February.

The task force, authorized by the National Organ Transplantation Act of 1984, will advise HHS on the medical, lethal, ethical, economic, and social aspects of organ transplantation. It also will advise HHS on the feasibility of setting up grant programs to develop new procurement organizations and networks. It must report to HHS and Congress on issues of immunosuppressive drugs by July and prepare a final report by next January.

Peer Review Suit Filed by Hospital Association

Making good on a long-standing threat, the American Hospital Association has sued the federal government over its implementation of Medicare peer review organizations (PROs).

One issue in the suit — the issuance of four sets of final PRO regulations — may be close to resolution, however, with reports that the regulations have cleared a snag in the Office of Health and Human Services Secretary Margaret Heckler and been sent to the Office of Management and Budget.

The regulations govern the way PROs conduct review, the appeals and sanctions processes, and the confidentiality of PRO data. Both hospitals and PROs have complained about the lack of final regulations. Minnesota Republican Senator David Durenberger has said that one of his first items of business as chairman of the Senate health subcommittee will be hearings on the program.

Another snarl in the overall implementation of the program has arisen, however, with the decision by PRO officials to reopen bidding on a so-called Super PRO contract. Four bids reportedly were received on the contract but the only organization which has publicly acknowledged its bid is the American Medical Association.

Filed January 29 in the U.S. District Court in the District of Columbia, the lawsuit does not seek to stop the operation of the PRO program. Instead it complains of inadequate public accountability in the installation of the program and calls on HHS to follow the Administrative Procedures Act in implementing the review system. HHS will have 60 days to answer the AHA complaint.

Vaccine Woes Heard on Capitol Hill

Unless government stockpiles are substantially bolstered and manufacturers are relieved of some liability, other vaccines could suffer the same fate as the diptheria, tetanus, and pertussis (DTP) vaccine.

Two lots of the DTP vaccine recently failed to meet potency standards, creating a sudden shortage of 2 million doses of the vaccine. The shortage forced physicians across the country to postpone booster shots to any child more than a year old.

Levels of oral polio vaccine (OPV) have also taken an unexpected dive. Last summer, when Lederle Labs removed aging doses of OPV from government stockpiles to distribute to physicians, backup supplies dropped from 3.4 million doses to 600,000 doses. If production had been suddenly interrupted, the nation would have had less than 12 days supply of the polio vaccine.

The situation has not created a health crisis at this time. Most children are already immunized against the diseases and partial immunizations are not expected to reduce immunity.

The problem could be eased by making the vaccine business more attractive to manufacturers by reducing the number of lawsuits, witnesses said. The present dollar demand of DTP lawsuits against Lederle is 200 times greater than their total sales of the vaccine in 1983.

Within the medical and congressional communities, there is general agreement that Congress should take steps to compensate children and families injured by vaccines. A federally sponsored compensation program, financed by a general revenue trust fund or a surcharge on each dose of vaccine, could also reduce the number of lawsuits, proponents believe.

Aspirin/Reyes Warning Set

Aspirin manufacturers this month agreed to develop new labels that warn of a possible link between aspirin and Reyes syndrome. Their action was based on newly released data from a Centers for Disease Control study which reveals a strong association between the children's disease and the use of aspirin.

Researchers found that 97% of children with Reye's Syndrome were reported to have used aspirin during respiratory or chickenpox illnesses before the onset of Reye's Syndrome. Of control case groups without Reyes syndrome, between 28% and 55% had received aspirin for matching illnesses.

National Health Policy Group Recommended

The Catholic Health Association has urged President Reagan and Congress to create a 15-member national commission on health policy.

CHA President John Curley told the Washington press corps that the commission's goal would be to "stop the nation's reliance on short-sighted, stop-gap measures that control health care costs without solving the problems that escalate costs."

Commission members, who would serve for three years, would be picked by President Reagan, the Speaker of the House and the President pro tempore of the Senate. Each would name five members consisting of a physician, a health care administrator, another health professional and two members from other fields such as insurance, labor, law, and business.

Letters to the Editor . . .

Dear Editor:

I would propose boards of physicians and attorneys appointed by the Governor to settle malpractice suits before they ever reach the courtroom. We need more education and less legislation. We need a cooperative effort by the medical and legal professions to tackle this malpractice crisis and bring it to an end.

Sincerely,
Henry Gall, M.D.
Retired Pediatrician
Cairo

Dear Editor:

I read with much interest [Bob Berg's] article " 'State Action' Doctrine as a Defense in Antitrust Challenges" in the February, 1985, [Legal Page in the] *Journal of the Medical Association of Georgia*. I found the article concise, well written, and very timely.

Thank you for this excellent contribution.

Ross W. Richardson
Vice President/Claims &
Loss Prevention
MAG Mutual Insurance Co.

Dear Editor:

While rummaging through the far recesses of one of my desk drawers recently, I ran across a clipping of which I am enclosing a copy. This was an article or letter to the editor written by Dr. T. C. Davison and published in the June, 1950, issue of the *JMAG*.

It has been one of my favorite stories over the years and I'm sure you are familiar with it. It may or may not have been republished by the *Journal* in the past 35 years but occasionally an editor needs a filler for an issue. This is such a good philosophy to live by that I thought you might wish to share it with your readers.

Let me congratulate you on the quality of the *Journal*. Every issue is an improvement, and the January, 1985, issue is exceptional. Your four special articles were all good but Corbett Thigpen's eulogy of Dr. Cleckley was superb.

Keep it up. Thank you.

Sincerely,
Thomas E. Reeve, Jr., M.D.
Surgeon, Carrollton

Enjoy Yourself: It Is Later Than You Think

It was several years ago; I was ill at the time. Dr. Edgar D. Shanks, editor of *The Journal of the Medical Association of Georgia,* asked me to write an article from the point of view of a patient. I wrote the article, "I Became a Patient" which was published in *The Journal*.

Recently, I have been ill again and among the books brought to me to read was "A Chinese Garden." It is a short story by Dr. Frederic Loomis, and gives the probable origin of the current expression "Enjoy yourself, it is later than you think." This story is to the point and furnishes food for thought. As I read it, I was reminded of a resolution on the death of a doctor friend of mine, published recently, which stated — "His life and work were characterized by a zealous devotion to his work. It is said of him that he had no hobbies, except his work, and he was untiring in it and never refused a request for aid from a patient."

Throughout his years of arduous work he had cherished the dream of some day having time to go fishing, which was the one sport he most enjoyed. At last in December, 1949, after surviving a series of heart attacks, he planned a vacation in Florida, where he could realize his ambition to go fishing. However, on December 27, 1949, he succumbed to cerebrovascular accident.

It was later than he thought — he did not live to realize his life's ambition to go fishing.

The following is the full quotation of "A Chinese Garden."

In A Chinese Garden

"In the past few years the epigram or aphorism which is the inspiration for this little story has been widely used (says its author). It was, in part, the title and the theme of a poem written years ago by Robert Service. It was used again, in part, as the title of a book on the perils of democracy written by Max Lerner and published in 1937. I have seen it used in numerous advertisements. If Robert Service coined the expression, if others saw it and read it in a Chinese garden, or if like other strange Chinese sayings, it made its way into our lives by other means, I do not know.

"I have been told the story of a certain letter which I received nearly ten years ago a good many times because the impression it made on me was very deep and very lasting, but I have never written it for publication; and I have never told it, on ships in distant seas or by quiet firesides nearer home, without a reflective, thoughtful response from several of those in the little group around me who made it a matter of immediate and personal concern either for themselves or for someone dear to them."

Peking, China

Dear Doctor:

"Please don't be too surprised in getting a letter from me. I haven't any real right to address you and I am signing only my first name. My surname is the same as yours.

"You won't even remember me. Two years ago I was in your hospital under the care of another doctor. I had never heard of you. I lost my baby the day it was born. That same day my doctor, who was skillful enough but perhaps not too understanding, came in to see me, and as he left he said, 'Oh, by the way, there is a doctor here with the same name as yours who noticed your name on the board, and asked me about you. He said he would like to come in to see you if you were willing and I would permit him to, because the name is not a common one and you might be a relative. I told him you had lost your baby and I didn't think you would want to see anybody, but it was all right with me.'

"And then in a little while you came in. You put your hand on my arm and sat down for a moment beside my bed. You didn't say much of anything but your eyes and your voice were kind and pretty soon I felt better. I was a very long way from home and had no one of my own. As you sat there I noticed that you looked tired and the lines in your face were very deep. I never saw you again but the nurses told me you were in the hospital practically night and day.

"This afternoon I was a guest in a beautiful Chinese home in Peking. The garden was enclosed by a high wall, and on one side, surrounded by twining red and white flowers, was a brass plate about two feet long embedded in the wall. I asked someone to translate the Chinese characters for me. They said:

'Enjoy Yourself
It Is Later Than You Think.'

"I began to think about it for myself. I have not wanted another baby because I am still grieving for the one I lost, but I decided that moment that I should not wait any longer. Perhaps it may be later than I think, too. And then, because I was thinking of my baby, I thought of you and the tired lines in your face, and the moment of sympathy you gave me when I so needed it. I don't know how old you are but I am quite sure you are old enough to be my father; and I know that those few minutes you spent with me meant little or nothing to you, of course — but they meant a great deal to a woman who was desperately unhappy and alone.

"So I am so presumptuous as to think that in turn I can do something for you too. Perhaps for you it is later than you think. Please forgive me, but when your work is over, on the day you get my letter, please sit down very quietly, all by yourself, and think about it.

Marguerite."

"Usually I sleep very well when I am not disturbed by the telephone, but that night I was restless. I woke a dozen times seeing the brass plate in the Chinese wall. I called myself a silly old fool for being disturbed by a letter from a woman I couldn't even remember and dismissed the thing from my mind; and before I knew it I found myself saying again to myself: 'Well maybe it is later than you think; why don't you do something about it?' And the argument with myself continued until I did what I really knew I would do all along. I went to my office next morning and told them I was going away for three months.

"It is a wholesome experience for any man who thinks he is important in his own organization to step out for a few months. The first time I went away on a long trip, some years before this letter came, I felt sure that everything would go to pieces, even though I had an entirely competent associate, but I was almost too tired to care. When I returned I found there were just as many patients as when I left, everyone had recovered just as fast or faster, and most of my patients did not even know I had been away. It is humiliating to find how quickly and competently one's place is filled, but it is a very good lesson.

I could almost see the balance swaying as he weighed the apparent demands of the present against the relatively few years each of us still had to live. . . .

"I telephoned to Shorty, the retired colonel who was perhaps my closest friend and with whom I had been around the world, and asked him to come to my office. On his arrival I told him that I wanted him to go home and pack a grip and come on down to South America with me for a little jaunt. He replied that he would like to but that he had so much to attend to in the next few months that it was out of the question to be away even for a week.

"I read him the letter. He shook his head. 'I can't go,' he said. 'Of course I'd like to, but for weeks now I've been waiting to close a deal for all that property I've had so long, down by the lake. I'm sorry, old man, but maybe sometime — sometime' — his words came more slowly. 'What was that thing again that woman said? 'It is later than you think'? Well —'

"He sat quietly for a moment. Neither of us spoke. I could almost see the balance swaying as he weighed the apparent demands of the present against the relatively few years each of us still had to live, exactly as I had done the night before.

"I can do none of these things because I am too busy. I am 55 years old and in 5 years more I shall stop. It is true I said the same thing 5 years ago. . . .

"At last he spoke, very seriously and thoughtfully.

" 'I have waited three months for those people to make up their minds. I am not going to wait any longer. They can wait for me now. Perhaps it is quite a little later than I have thought in the last few years. Maybe they are the last few years — and — '

"He jumped to his feet, again the soldier, replacing the dreamer of a moment before.

" 'They can go to the devil. They can go and jump in that damn lake for all I care;' and then more quietly: 'When would you like to go?'

"We went to South America. We spent day after day at sea on a comfortable freighter, feeling our burdens slip off with the miles and our tired bodies being made over by the winds that swept across the Pacific from China. In the course of time we found ourselves in one of the great cities of South America. By good fortune, we became friendly with one of the prominent men of the country, a man who had built enormous steel plants and whose industries were growing rapidly. We went with him on Sunday to his *estancia,* where we were entertained with the perfect hospitality of the South American aristocracy.

"During the afternoon, Shorty, who loves his golf, asked our host if he played the game. He replied: 'Senor, I play a little, I would like to play more. My wife is on a vacation in the United States with our children. I would like to join her. I have beautiful horses here which I would love to ride. I can do none of these things because I am too busy. I am 55 years old and in 5 years more I shall stop.'

" 'It is true I said the same thing 5 years ago, but I did not know how much we should be growing. We are building a new plant in Cali; we are making steel such as South America has never known. My steel will still be good when I am gone, and I must watch until our way is made more clear. I cannot let go even for an afternoon of golf. My office boy has better leisure.'

" 'Senor,' I said, 'do you know why I am in South America?'

" 'Because,' he said 'because perhaps you had not too much to do and had the necessary time and money to permit it.' "

" 'No,' I replied, 'I had a great deal to do and I did not have too much of either time or money. We are sitting here on a lovely terrace because a few weeks ago a girl whom I wouldn't know now if I saw her looked at a brass plate in a Chinese wall in the city of Peking in the heart of China.'

"I told him the story. Like Shorty, he made me repeat the words 'Enjoy yourself, it is later than you think.' During the rest of the afternoon he seemed a bit preoccupied, but continued to be a solicitous and perfect host.

"The next morning I met him in the corridor of our hotel. 'Doctor,' he said, 'please wait a moment. I have not slept well. It is strange, is it not, that a casual acquaintance, which you would say yourself you are, could change the current of a very busy life? I have thought long and hard since I saw you yesterday. I have cabled my wife that I am coming. I shall do myself the honor of calling upon you when I am there.'

"He put his hand on my shoulder. It was a very long finger indeed, that wrote those words on the garden wall in China."

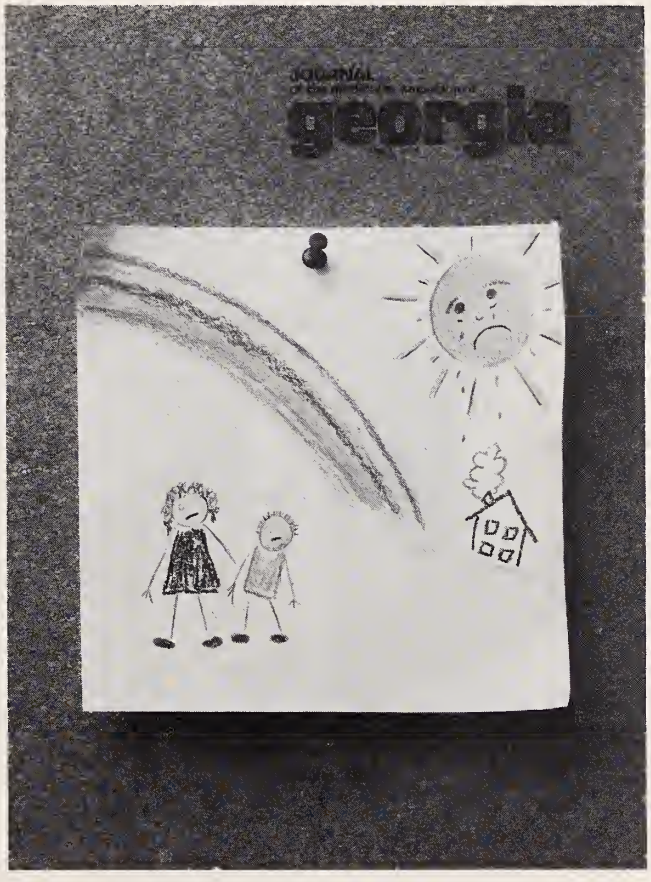
To the members of the medical profession, especially to those who are past 40 years of age, I wish especially to commend the above story for thought.

To the members of the medical profession, especially to those who are past 40 years of age, I wish to commend the above story for thought.

A former patient of mine whom I had explored for painless jaundice, and found advanced carcinoma of the pancreas and liver, during his convalescence, talked to me quite freely, and being older than I, at the time, gave me some good advice. He said that he had been working hard all of his life, taking no vacations, with the idea of enjoying himself, on his savings, in his old age. Now it was too late to carry out his plans — he was dying and leaving his savings to others. He offered me this advice for what it was worth — "You must have your pleasure from day to day and not try to save it up for some tomorrow, when it will be too late." To my fellow physicians again I would like to repeat — "Enjoy yourself, it is later than you think."

T. C. Davison, M.D.

Special Issue



The Auxiliary And The Child

CHILD ADVOCACY

"When the lamp is shattered
The light in the dust lies dead —
When the cloud is scattered
The rainbow's glory is shed."
—Percy Bysshe Shelley (1792-1822)



THE RAINBOW has become a symbol of hope for many of today's unfortunate children who are facing anew a problem that is as old as the ages.

Contrary to what most people believe, maltreatment of children is not confined to modern times. A glance backward into literature will reveal that for centuries children have been mistreated — starved, neglected, abandoned, beaten, maimed, and even killed with impunity.

A Historical View of Child Abuse

Infanticide was a form of family planning in the early provinces of China. If a woman had more than three children, the excess had to be destroyed. In Arabic countries, illegitimate babies, especially females, were put to death routinely.

During the 15th and 16th centuries in rural areas of Ireland, unwanted babies were roasted alive over fires. A favorite sport in India was throwing babies to the crocodiles.

In England, as late as the 19th century, some women would hire themselves out as nurses to illegitimate children and then kill them after collecting their money. There was an insurance system called "burial clubs," in which a participant could invest a small sum and make as much as 5 pounds when a child was buried. Midwives would accept fees to arrange for the death of a newborn infant.

Often the heir to a throne was eliminated because the reigning monarch must protect his position. The Book of Exodus tells us that when Pharoah feared the Jews, he ordered the slaughter of newborn male babies. In the Gospel of Matthew, we learn that Herod commanded the slaying of all children in Bethlehem when he foresaw the coming of a Messiah. The Bible reveals other allusions to sacrifice of children, many times by burning.

Congenitally deformed babies, considered to be evil, were killed at birth in many Oriental societies. The Greeks and Romans also destroyed their weak and defective children following their famous philosophers' beliefs in the survival of the fittest to strengthen the human race. Other babies adjudged to be "unfit" were thrown from a high place into a deep ravine.

In some countries, rites were held regularly where infants were cast into rivers as offerings to water gods in return for a productive harvest. In others, women and siblings were fed the flesh of slain infants in the belief that this would cure disease or bring good health.

In Germany during the 16th century, children were buried alive under doorsteps of public buildings to "insure durability," and the bodies of other children were used in building dikes. Such a practice, however, was not an innovation of the Germans. Joshua had threatened to bring a curse against any people who would try to rebuild Jericho if they did not lay the foundations with the bodies of their firstborn babies.

Mutilation and castration of children have at one time or another been worldwide practices, often as part of religious ceremonies. Other forms of abuse have resulted from children being held in enslavement as workers in fields and factories, or imprisoned in concentration camps, where they have been subjected to all kinds of brutality. During World War II, Adolph Hitler, said to have been an abused child himself, retaliated against society by ordering children (mostly Jews) to be goaded by whips on marches with their parents.

Nor has "justifiable discipline" of the young escaped the harsh realities

A Role For Auxilians

of cruelty, whether administered by parents, teachers, ministers, or guardians. As far back as Biblical times, whipping children in order to teach them to obey has been seen as the legal right of almost anyone charged with the care of children. Corporal punishment in our schools is still condoned.

Yet, while comment had been made about neglect and maltreatment of children in the medical literature as early as the mid-1500s, child abuse was not recognized as a distinct and possibly treatable disorder until the 19th century. Recognition of the problem had its early beginning in France in 1860 with the work of Dr. Ambroise Tardieu.

Child Advocacy in Modern Times

The first serious effort in this country to regulate the rights of parents and other guardians in the handling of children came in the late 1800s in New York City. The case of a small child who was found to be badly mistreated by her adoptive parents was brought to court by alarmed church workers. When they found that the existing laws against child abuse were ineffective, they turned to the Society for the Prevention of Cruelty to Animals, founded about 75 years earlier. As a result of this case, the New York Society for the Prevention of Cruelty to Children was organized, and other groups began to spring up across the country to insure the rights of children. Those societies were the forerunners of today's protective agencies.*

The mid-1940s spawned a new and heightened concern among pediatricians for the welfare of infants and children who were being brought to them with multiple and unexplained injuries. Thereafter, non-accidental trauma was reported more often and the term "battered child syndrome" was coined. Today, everyone is encouraged to report suspected but unproven cases of abuse. As a result, the proliferation of reported cases of "battering adults," both real and imagined, knows no geographic or socioeconomic boundaries.

This dramatic rise in reported cases has brought about another increasing concern — a disturbing growth in the number of erroneous and false cases reported to authorities. With vindictiveness or public approval often the reason for reporting a case of possible abuse, the practice has become what is being called a "witch hunt," causing fear and severe emotional problems in previously healthy children and adults alike, and in some cases the actual destruction of the family unit. New means of more correctly identifying abuse have had to be developed. In our present-day society, where parents no longer are the sole caretakers of their offspring, various methods must be offered for recognizing and dealing with the true cases of abuse.

In an effort to scatter a few clouds and bring some sunshine into the lives of our state's helpless children, the Auxiliary to the MAG has joined with the MAG in an ongoing program to assist the public in facing the major problems that exist.

This issue of the *Journal* considers the different types of child abuse, as well as the ways in which members of county auxiliaries are cooperating with other organizations on a local level to carry out the many other goals of the state group.

Special thanks are due to Barbara Tippins (Mrs. William C.), 2nd vice president and projects chairman of A-MAG, for invaluable assistance in collecting articles to be included.

** Acknowledgment is made to Dr. Selwyn M. Smith of Ottawa, Canada, for personal correspondence and printed material on the history of child abuse. Dr. Smith is Associate Professor of Psychiatry, University of Ottawa Faculty of Health Sciences, and Psychiatrist-in-Chief, Royal Ottawa Hospital. He is author of the book,* The Battered Child Syndrome *and editor of* The Maltreatment of Children.



Evelyn W. Gay (Mrs. Brit B.)
Guest Editor
Auxiliary to the Medical Association of Atlanta

Meeting Challenges

We, truly, are an organization that seeks to improve the health and welfare of the people in our community.

SERVING this year as President-elect of the Auxiliary to the MAG has been a rewarding and educational experience. It has given me the opportunity to see the Auxiliary from a point of view that otherwise might not have been possible. It is a marvelous feeling to observe our membership in action. We, truly, are an organization that seeks to improve the health and welfare of the people in our community. Yes, we share a common goal with the MAG — one of "helping to improve the quality of life and health of others."

The Child Abuse Campaign, "It's OK to Tell!," is a prime example of the involvement we share. We were there when our medical community needed us as volunteers. We are involved and are willing to do our best. The Auxiliary has the bond of true peers.

We are a part of a federation — national, state, and county. Cooperation within the three organizations can help us reach our own individual goals. At the national level, we can take advantage of the materials, activities, planned programs, and leadership workshops available. Leadership training and timely health topics were presented to more than 250 county presidents-elect at the AMA Auxiliary's Leadership Confluence held in October, 1984, at the Drake Hotel in Chicago. The Auxiliary to the MAG was represented by a delegation of 13, including eight county presidents-elect, the state president, state president-elect, and state membership chairman, along with two national representatives. A variety of seminars were offered to help strengthen leadership skills of the participants, as well as to get the participants involved in health-related topics.

On a state level, we act as coordinator for the national programs while the county auxiliaries work toward implementing these activities in their communities. In order to strengthen our involvement and unity at state and county levels in June and November, 1984, workshops were offered to county presidents-elect in conjunction with Summer and Winter Board Meetings. These sessions were meant to inform the participants of proposed plans for the coming year and also to provide a rap session for them to share their ideas and intents for 1985-1986. These workshops gave us an opportunity to become acquainted with each other and the working of our organization before our year of service. It has been a year of planning, sharing, and growing.

It is through our combined efforts that we will successfully reach our goals in the present and in the future. We as auxilians take pride in our organization, realizing that as we meet the challenges of our changing world, the well-being of our country is our responsibility.



Ann Purcell (Mrs. Dent W.) is a past president of the Georgia Medical Auxiliary (Savannah), and is President-elect of the Auxiliary to the MAG.

—*Auxiliary President*



Build Today For A Better Tomorrow

"Somewhere over the rainbow, bluebirds fly; birds fly over the rainbow, why, then, oh, why can't I?"

EVERY CHILD deserves to dream and to fly as high as life can take them. The Auxiliary to the MAG is helping children fulfill their dreams and soar to their highest potential. Child abuse in our country today has become an ugly reality that few of us ever even cared to think about. But as this reality was made clear to us, our organization was eager to accept the challenge from the MAG to do our part in combating this terrible blight on our society. We agreed to produce the puppet show "Someone To Talk To" to school children around our state. The puppet show is only a part of the total "It's OK To Tell" campaign sponsored by the MAG and the Georgia Department of Human Resources. The purpose of this campaign is to focus attention on child abuse and to offer families the help they need to solve their problems.

Auxilians are caring, loving people who are spouses of doctors in our state. Our organization consists of around 2600 very busy members who involve themselves in promoting better health in their own communities. We have carried out our theme well this year of "Build Today For A Better Tomorrow."

Some of the many health projects in which our members have involved themselves are:

A. Numerous projects on Drug Abuse in schools as well as participation in the Impaired Physicians Program.
B. Learning Center: "Healthy Bodies, Healthy Minds, Happy People" — teaching aides that help children develop a better self-concept by learning moral values, decision making, coping skills, etc.
C. Toys for Tots — Christmas charitable project.
D. Infant car seat loaner programs
E. Scholarship awards
F. International Health — a project that collects and sends medical supplies to Bolivia.
G. Hospice Programs
H. Breast self-examination classes
I. Postponing Sexual Involvement — a series of lessons developed to help young people resist pressures to become sexually involved before they are able to handle the implications of such development.
J. American Medical Association Education and Research Foundation (AMA-ERF) — involves donations by our county auxiliaries to medical schools throughout the nation.

These are only a few of the many health projects that doctors' spouses conduct in their communities. We salute the county auxiliaries all over this state for their volunteer effort in the name of medicine.

Our organization is also a statewide network of support groups for one another. We care about each other and offer assistance and moral support as our members face any adversity. That rainbow in the sky shines brighter for all of us as we "Build Today For A Better Tomorrow."

Ann (Mrs. Robley D.) Smith, Tifton
1984-85 President, A-MAG

Child Abuse and Neglect

Child abuse and neglect have been extensively analyzed and publicized for all strata of society, especially in the last 10 years. A current resurgence of interest by various . . . advocates of children coincides with recent shocking reports in the media of a number of cases of sexual abuse.

by Marcella Wood, M.D.

THE 1½-2 MILLION CASES of child abuse and neglect reported annually in this country constitute a problem of epidemic proportions. This can be better realized when child abuse cases are compared to the number of deaths from motor vehicle accidents for 1981: 52,300; the number of new cases of cancer predicted for 1984: 870,000; or the total number of reported cases of AIDS: less than 6,000 by the end of June, 1984.

In Georgia in 1983, there were 19,394 cases of child abuse reported, involving 33,000 children, an increase of 26% over 1982. Of these, 13,283 were cases of neglect. In 1984 in Georgia, over 21,000 cases of abuse had been reported by autumn.

Child abuse and neglect have been extensively analyzed and publicized for all strata of society, especially in the past 10 years. A current resurgence of interest by various individuals and organizations, all advocates of children, coincides with recent shocking reports in the media of a number of cases of sexual abuse. This has resulted in a virtual explosion of investigations and involvement in confronting this serious and complex psychosocial-medical phenomenon. There has been a proliferation of medico-social and legal articles, workshops, booklets, and seminars contributing to informing the public and offering available resources for both victims and high-risk caretakers.



Dr. Wood (right) instructs a mother in the parenting process at a DeKalb County clinic.

Types of Abuse

The Georgia governor's office, the MAG, the Georgia Chapter of the American Academy of Pediatrics, and an abundance of medical journals have virtually bombarded medical personnel with pertinent information in all phases of the problem — physical, emotional, sexual, and neglect.

Physical abuse is defined as nonaccidental injuries (internal and external) inflicted by a parent or caretaker, and is marked by different stages and configurations of trauma areas. This type of abuse gets the most attention.

Emotional abuse is a lack of a loving environment for a child by maladaptive parenting or caretaking interaction, such as scapegoating, unreasonable demands, higher expectations for a child's development, verbal assaults, or ignoring the child. This is the most difficult form of abuse to diagnose and manage.

Sexual abuse includes sexism or exploitation by parent or caretaker, such as indecent exposure, fondling of sexual organs, child pornography, prostitution, incest, or actual harm.

Neglect is the willful failure by the family or community to provide adequate care to children. This is the most prevalent form of child abuse. It includes failure to thrive because of inadequate provision of food, shelter, and other substantial needs.

Dr. Wood (Mrs. William A.) is a pediatrician and an active member of the Auxiliary to the Medical Association of Atlanta. Send reprint requests to her at 3764 Briarcliff Rd., NE, Atlanta, GA 30345.

Identifying Those At High Risk

School personnel, public health nurses, emergency room and hospital personnel, as well as medical practitioners, are doing a better job of reporting suspected incidents of physical and sexual abuse. Neighbors and the child victims themselves also contribute to reported cases. Yet many cases remain unreported, or are reported after years of psychologic damage and possible perpetuation of the pattern of abuse.

What more can be done?

The doctor is told to observe the high-risk families with a plan for anticipatory guidance, to see them often, and to spend more time with them.

Parents Anonymous is a non-intimidating support group which attempts to prevent child abuse by helping parents and/or others who cannot cope well with children.

High-risk family situations include adolescent pregnancies, single parent households, break-up of the family nurturing group, live-in unmarried mates, decrease in positive male role models, substance abuse, unemployment with financial crisis, social and career pressures of the affluent, and ignorance of child development guidelines, as well as various other stress factors.

Surveying this list shows that many of these factors are apparently on the rise, and few family units are completely immune. Unfortunately, many of the high-risk groups have no established continuing doctor-patient relationship, no continuing well child care or developmental instructions. This is regrettable indeed, as ambulatory child care seems to be increasingly dominated by psycho-social problems more than traditional serious medical diseases.

Helping Both Victims — The Abused and Abuser

With the new wave of interest generated by front page exposés, there are few organizations, public or private, that are not offering positive approaches in an attempt to arrive at some solution. Urban communities especially have an abundance of helpful resources, such as child abuse hotlines, state and county Child Protective Services, the Department of Family and Children Services, Parents Anonymous, mental health centers, and other support groups at hospitals, schools and churches.

For example, listed in the "cultural, educational, and just plain fun to do opportunities" for Metro-Atlanta residents at the start of 1985 was an announcement in a weekly newspaper of "a support group for adults who were abused as children" at a local hospital. State chapters of support organizations and the Department of Human Resources' (DHRs) Child Protective Services are providing help to the smaller counties to make the needed groups available in rural areas. Parents Anonymous is a non-intimidating support group which attempts to prevent child abuse by helping parents and/or others who cannot cope well with children. Pilot programs, such as DHR's Latchkey Program, providing supervised activities for otherwise unattended children, show promise in their early stages.

There are video tapes for instructing interview techniques in the questioning of abused children, closed circuit TV observation (with concealed cameras) of interviews, and anatomically correct dolls — all available to decrease the trauma and embarrassment to the people involved. Medical auxiliaries are sponsoring puppet shows as part of a campaign with the theme, "It's OK To Tell."

Urban communities especially have an abundance of helpful resources, such as child abuse hotlines, state and county Child Protective Services, etc. . . .

As with any medical problem, however, prevention is still the most important aspect. Ideally, each child should be planned for and wanted. Substance abuse should be actively treated. Counseling should be available before crises occur. Child developing and parenting workshops should be available to all.

When government funds are not available, parenting groups may be formed with qualified personnel from local community members at more churches, schools, and hospitals, as the current trend seems to indicate. Parenting classes tend to give caretakers increased self-esteem, facilitating the ability to cope with children. By giving developmental guidelines for age-appropriate behavior, the classes explain the norms for certain aggravation factors such as crying, toilet training problems, or curiosity.

As the custodian-caretakers for our children, we must accept child abuse as a problem for each of us to address.

"It's OK To Tell"

The major goals of this campaign are to increase community awareness of the problem and offer encouragement for reporting suspected cases of abuse.

by Ann Satcher

On August 27, 1984, the kick-off news conference for the child abuse campaign called "It's OK To Tell" was held at the Academy of Medicine in Atlanta, with the Auxiliary to the Medical Association of Atlanta acting as host. Among those present were: Governor Joe Frank Harris; Dr. S. William Clark, Jr., President of the MAG; Mrs. Robley D. Smith, of Tifton, President of the Auxiliary to the MAG; and more than 300 guests, including physicians, representatives from the Georgia Department of Human Resources (DHR), Department of Family and Children Services personnel, legislators, judges, auxiliary members, and news people from the major media in the Atlanta area.

The MAG and the DHR are sponsoring this campaign which is being directed toward stemming all four types of child abuse: neglect, and physical, emotional, and sexual abuse. The major goals are to increase community awareness of the problem and offer encouragement for reporting suspected cases of abuse.



This problem was brought to the forefront of concern by statistics which showed that in Georgia alone, over 33,000 children reportedly were abused in 1983, an increase of 26% over the previous year. That number had grown by several thousand more by the end of 1984. Sixty-nine percent of these cases were of neglect of small children.

The observation was brought out at the meeting that physicians "as traditionally respected leaders in the community have the power to garner public support and take a leadership role in community efforts to prevent child abuse." But, according to Mrs. Robley D. Smith, President of the Auxiliary to the MAG, the medical profession alone cannot eliminate child abuse.

A display on the Child Abuse Campaign in Georgia was exhibited during the Leadership Confluence at the Drake Hotel, Chicago, on October 15, 1984. Shown, left to right, are Ann (Mrs. Robley D.) Smith, of Tifton, President of A-MAG, and Ann (Mrs. Dent W.) Purcell, of Savannah, President-elect of A-MAG.

Mrs. Satcher (Milton B.) is a past president of the Auxiliary to the Medical Association of Atlanta and of the Auxiliary to the MAG. She currently serves on the AMA Auxiliary's Projects Committee. Send reprint requests to her at 1171 W. Paces Ferry Rd., Atlanta, GA 30327.

"Physicians usually see abused children only after the abuse has caused visible injury," she said. "Earlier reporting of suspected abuse by neighbors, friends, and other concerned people can provide help for a child before the child's injuries warrant medical care."

That is where the medical auxiliaries across the state can be a vital link between the medical association and the community, she pointed out. While physicians are being furnished with printed materials and a slide show to be viewed at county medical society meetings to keep the campaign fresh in their minds, members of the state's 42 county medical auxiliaries are developing their own programs to participate in the campaign.

Information kits containing news releases, fact sheets, suggested feature stories, and public service announcements have been sent to each county auxiliary to be used in planning their programs. Much is being accomplished by these groups, primarily in the schools where a puppet show entitled "Someone To Talk To" is being shown to teachers and students alike.

"We anticipate that approximately ¾ of our auxiliaries will participate in this project," Mrs. Smith says. The others, which are too small to work alone, are combining their efforts with other organizations in their localities.

In order to get news of the campaign to the people, many methods are being used, including billboards and notices on MARTA schedules. Four media conferences also were held later in Macon, Columbus, Augusta, and Savannah. At these events, the Lt. Governor of Georgia and the Deputy Commissioner of the DHR, along with medical association and auxiliary members, were on hand to tell the people about the campaign. The auxiliary members also will bring the message of the campaign's purposes to the general public through radio and television announcements.



Left to right: Margaret (Mrs. Philip) Bartholomew, of Atlanta, President of A-MAA; Governor Joe Frank Harris; and Ann (Mrs. Robley D.) Smith, of Tifton, President of A-MAG, at press conference and kick-off at the Academy of Medicine, Atlanta, for "It's OK To Tell" Campaign.



Left to right: Anna Kathryn (Mrs. A. C.) Brown, community health chairman, A-MAA; Margaret (Mrs. Philip) Bartholomew, President A-MAA; Ann (Mrs. Robley D.) Smith, President A-MAG; and Ann (Mrs. Milton) Satcher, AMA Auxiliary Projects Committee, at press conference.

Communicating Through Puppets

Almost every county auxiliary is participating in this project which uses hand puppets to communicate to children about the delicate and emotionally charged subject of child abuse.

by Raye Coplin and Carol Ann Hardcastle

FIVE YEARS AGO, Katherine Flanagan, of the Clayton County Department of Family and Children Services, wrote the script for a puppet show designed for children in kindergarten through fifth grades. It is entitled "Someone To Talk To" and is a show which uses hand puppets and deals with several phases of child abuse: physical abuse, sexual abuse, and neglect. The show was well received in Clayton County and is still being performed there today. In the production, there is a social worker who introduces the show to the children and also asks them questions at the end. She makes sure they have gotten the point of the show, which is: when you have a problem it is all right to talk about it, and there is always someone who will listen and understand.

This year, the Medical Association of Georgia and the Georgia Department of Human Resources (DHR) joined forces in a campaign against child abuse, called "It's OK To Tell." As a part of the campaign, MAG presented the Clayton County puppet show to all the state's medical auxiliaries and urged them to present it to children over the entire state. The auxiliaries were extremely enthusiastic about the project, and some immediately decided to become involved.

Almost every county auxiliary is participating in this project in some way. Some auxiliaries have joined with other organizations in putting on the puppet show.

Just before the Baldwin County schools were dismissed for the Christmas holidays, the *Baldwin County Medical Auxiliary,* headed by Mrs. Anegundi Nagendra, presented the puppet show for the county's teachers, principals, and staff. Dr. Gardner, school superintendent, expressed his appreciation for the event which was attended by about 60 people. The puppet show began a schedule in the schools on February 1, with the support of the Baldwin Family and Children Services and the staff of the public library.

In *Bibb County,* a committee of 11 auxiliary members began to function under the co-chairmanship of Sally Branan and Beverly Noller. Their goal was to reach as many children and adults as possible in their area. According to the August, 1984, Public Affairs

Mrs. Paul R. Coplin (Raye) is President of the Bibb County Medical Auxiliary, and Mrs. William R. Hardcastle (Carol Ann) is President of the DeKalb Auxiliary. Also contributing to this article were Mrs. Don W. (Wanda) Roberts, President of the Tift County Auxiliary, and Mrs. John R. (Claudia) Stephenson, President of the Muscogee County Auxiliary. Send reprint requests to Mrs. Hardcastle, 1585 Chevron Dr., Dunwoody, GA 30338.



Left to right: Mrs. James (Sally) Branan, and Mrs. Stephen (Beverly) Noller, co-chairmen of the Bibb County Child Abuse project.



Mrs. Russell Simmons, of Columbus, designed a coloring book called "It's OK To Tell" to be distributed to children in grades K through 3.

Report from the DHR, there were 44,109 children under the age of 18 living in Bibb County. Last year, the County Department of Family and Children Services received 841 reports of child abuse. Broken down into categories, the numbers of children involved were: 263 physically abused; 1,188 neglected; and 73 sexually abused. The remaining were emotionally or otherwise abused.

A film of the puppet show was shown to volunteers. Then, by investigating Bibb County's resources, the auxiliary committee discovered that the Older American's Council (OAC) had already instituted the program and was showing the puppet show in area schools. In August, the auxiliary formed a coalition with the OAC as they were in great need of manpower help.

Two training sessions, on September 17 and 25, 1984, were held for auxiliary members with Mr. Charles Thomas from OAC. Shortly before this, a press conference had been held at the Lewis B. Wilson Airport with Georgia's Lt. Gov. Zell Miller and MAG President Dr. S. William Clark, Jr., alerting the public to this mounting social problem.

In the following weeks, Sally Branan taped a program on child abuse with Dr. John Souma for the Cox Cable show, "Medicine Today." As part of



Mrs. Don W. (Wanda) Roberts, President of the Tift County Auxiliary, shows their puppets on a display table of projects at a Media/Legislative Dinner held in Tift County.



Children's Week was celebrated in Bibb County by presenting the puppet show, "Someone To Talk To," to school children in the area.

Children's Week in October, the puppet show was performed by auxiliary members, with Mr. Charles Thomas facilitating, at the Westgate Mall. Approximately 150 children and adults viewed the program, and there was interesting dialogue between adults and children. Sally Branan and Mr. Thomas also taped the "Doris Martin Show" which aired in late October. Since November, 15 schools have been visited in Bibb County. The show has reached 8,520 children with live showings. The program has been performed 121 times, and has been aired 12 times on local TV stations in whole or in part, focusing on individual abuse problems.

In addition to school children in Bibb County, the following groups have seen the puppet show: Macon County schools (elementary children and teachers); Wilkerson County elementary schools and teachers; the Regional Youth Development Center in Macon; numerous day care centers; the Georgia Federation of Women's Clubs; neighborhood apartment complexes, under the Macon Housing Authority; Macon Tech Child Development classes; Foster Grandparent Volunteers; Middle Georgia Association for Young Children (day care workers); and the American Association of Medical Assistants.

MAG, the Auxiliary, and DHR will be watching very carefully to see if there is an increase in the reporting of child abuse incidents as time passes following the production of the new puppet show.

The *Bibb County Medical Auxiliary's* March meeting also focused on child abuse. Michael Meridith, President of Child Industries from Salt Lake City, Utah, and Representative DeWayne Hamilton from Savannah shared their valuable knowledge on the subject. A Prevention Awareness Technique Kit was demonstrated and made available for purchase.

The *Bibb County Medical Auxiliary* also actively took part in the Annual Health Fair called, "Stay In the Pink," on March 13 and 14. Members performed the puppet show and gave out information on both days at a designated booth. The health fair was



Getting organized for the Tift County puppet show are (L to R): Mrs. Steve (Jeannie) Rigdon, Mrs. Stewart D. (Carol) Gilbert, Mrs. John F. (Barbara) McCoy, Mrs. W. Charles (Karol) Pfister, and Mrs. Sammie D. (Latrelle) Dixon.

estimated to have had 1,600 adults and children for medical screening. Over 2,000 people participated in this event and viewed the puppet show.

The *DeKalb County Auxiliary* used a kit put out by Clayton County which included patterns for making the puppets and directions for constructing a stage. The members made their own puppets of felt, stuffed with cotton and adorned with yarn hair. A tape was made for the puppets' voices. Everyone who has participated in the show is inspired by the looks on the children's faces and their answers to the questions asked by a social worker at the end of the show. The show is now being presented in many DeKalb County schools, and the auxiliary is receiving many more requests for it.

The *Muscogee County Auxiliary* began researching child abuse projects in the county in August and discovered that the puppet show was in full operation in the schools and being done by the Retired Senior Volunteers. The auxiliary members met with the local Family and Children Services representatives and decided to distribute coloring books to the 20,000 elementary school students in the area. Since the cost of available coloring books was prohibitive, the auxiliary decided to print its own. Mrs. Russell Simmons designed the illustrations for a book which is called appropriately, "It's OK To Tell." Mrs. Robyn Hanna got Blue Cross-Blue Shield to print the book free, and the Muscogee County School Board approved the book in December. In the middle of this process, the Anne Elizabeth Shepard Home, in conjunction with The Bradley Center, received a grant to buy Spiderman child abuse comic books. A coalition was formed between the organizations, and the auxiliary coloring book, which is geared for younger children, is being distributed to children in grades K through 3. The Spiderman comic book, geared for older children, is distributed to children in grades 4 through 8. Dis-



Left to right: Mrs. George R. (Judy) Jones, immediate past president of A-MAG, Mrs. Ralph A. (Wilma) Tillman; and Mrs. William R. (Carol Ann) Hardcastle, president of the DeKalb Auxiliary, display the puppets they had just completed to begin their shows to DeKalb school children.

tribution and a public awareness week took place during the middle of March. The kick-off was a free program open to the public. The keynote speaker was Mrs. Anne Cohn, Executive Director for the National Committee on Child Abuse.

Other county auxiliaries may obtain copies of the Muscogee County coloring book by writing to Mrs. John R. Stephenson. The cost of printing the book is 20¢ to 25¢ a copy. The Spiderman comic book costs 20¢ a copy.

The *Newton-Rockdale Auxiliary* has been presenting the puppet show in Newton County schools, and is making plans to get the show included in the second grade curriculum in Rockdale County. The auxiliary will work with the Junior Women's League and other community organizations to produce the puppet show.

The *Sumter County Auxiliary* in Americus is making 10 puppets and a stage to begin their show, and the *Thomas Area Auxiliary* hosted a dinner for physicians on Doctors' Day, March 30, at which the puppet show was presented.

MAG had several sets of puppets made for the use of the various county auxiliaries. Some counties use these. Some of the smaller county auxiliaries, such as *Tift County,* which was the first in the state to produce "Someone To Talk To," have already covered their entire counties.

The puppet show was presented to all of the third graders in *Tift County,* in both public and private schools, with the help of the local Department of Family and Children Services. This project involved about 30% of the membership of the auxiliary and took about 9 weeks to complete. The audience groups were kept small, as was recommended by the program developers, to encourage response from the children. Tift Auxiliary has been asked to advise in the creation of a Child Abuse Task Force for the area.

The *Whitfield-Murray Auxiliary* has purchased the Clayton County puppet show, and offers of help and requests for showings have begun.

MAG, the Auxiliary, and the Department of Human Resources will be watching very carefully to see if there is an increase in the reporting of child abuse incidents as time passes following the production of the new puppet show.

In the future, MAG would like to see the school systems throughout the state incorporate the puppet show into their regular curricula. However, until this occurs, the auxilians will continue presenting the show to children in our state.

The Pediatric Radiologist Looks at Child Abuse

Pediatric radiologists have played and continue to play a vital part in the recognition and diagnosis of child abuse. The role of imaging has expanded well beyond diagnosing the classic subdural hematomas and traumatic skeletal changes of abuse to encompass every organ system.

by Turner I. Ball, M.D.

THE MOST ACCURATE diagnostic tool for bone injury is X-ray, and because the insults are so common in child abuse, we in pediatric radiology are often the first to see and recognize them. It is then necessary to make the connection between the injuries seen and the possibility of child abuse. However, in today's practice of pediatric radiology, we are so keenly aware of child abuse and its diagnosis, we tend to forget that not until the 1960s were all the parts of this complex syndrome recognized.

The landmark article, "The Battered-Child Syndrome," was published in the *Journal of the American Medical Association* on July 7, 1962, by Drs. Kempe, Silverman, Steele, Droegemueller, and Silver.[1] As we are all now aware, child abuse is as old as mankind, but it took this article to awaken us to things we had been looking at since the invention of X-rays but had failed to recognize. Many, many reports have followed, and the role of imaging has expanded well beyond diagnosing the classic subdural hematomas and traumatic skeletal changes of abuse to encompass every organ system.

Historical Review

Any telling of the history of child abuse from the radiologist's point of view must start with the article Dr. John Caffey wrote in 1946.[2] In this paper, Dr. Caffey describes children with chronic subdural hematomas associated with long bone fractures, often multiple and in various stages of repair. Although no history of trauma or abuse was obtained, Caffey indicated that both the subdural hematomas and fractures were probably traumatic in origin. He says that the injuries "were either not observed or were denied when observed."

In 1953, Dr. Fred Silverman wrote an article[3] which further explored unrecognized trauma in infants and young children. By this time, there was the budding idea of child abuse as such, and several articles appeared supporting the idea that the skeletal lesions were indeed traumatic and probably willfully inflicted.[4-6] It was not until 1962 in the article already mentioned[1] that all aspects of the syndrome were brought together and given wide distribution in the medical community.

Here we must share with and give much credit to Dr. C. Henry Kempe for this remarkable contribution. Dr. Kempe was professor and chairman of pediatrics at the University of Colorado and devoted much of his professional life to the description and recognition of child abuse. After 1962, the medical writing about willful abuse of children skyrocketed, with the number of articles reaching about 50 by 1970. Dr. Fred Silverman, then at the University of Cincinnati, wrote the radiologic section of the 1962 *JAMA* article. Later, Dr. Silverman gave the annual Rigler lecture at the University of Minnesota in 1971, and Dr. Caffey gave the first Neuhauser lecture before the *Society for Pediatric Radiology* (SPR) in 1972, both as wide ranging discussions of child abuse. Both lectures have been published in the radiologic literature and are fascinating reading for anyone interested in the subject.[7, 8] Since these pioneer works, the literature has grown in volume

Dr. Ball is a pediatrician as well as a radiologist and holds faculty appointments in both specialties at the Emory University School of Medicine. This article, taken from a prepared talk given frequently before various groups, was contributed at the request of the Auxiliary. Send reprint requests to him at The Henrietta Egleston Hospital for Children, 1405 Clifton Rd., NE, Atlanta, GA 30322.



Figure 1a — AP view of the lower leg of an infant shows the classic metaphyseal fraying (white arrows) at both ends of the tibia. This fraying represents fractures which result from violent shaking of the child during which the covering of the bone is torn away and pulls with it fragments of bone.



Figure 1b — A view of the lower leg of another infant showing minimal metaphyseal fragmentation (white arrow) as demonstrated in Figure 1a, but also extensive periosteal new bone formation in the distal femur (black arrows) which results when the bone covering is torn loose and the blood clot between it and the bone itself begins to calcify.

and includes injuries to organs other than the skeleton or central nervous system. In recent years, it has included the use of modern imaging techniques such as nuclear medicine and computed tomography (CT).

When we stop to examine the radiologic manifestations of abuse, it is now apparent that every organ system in the body is vulnerable. From the initial demonstrations of fractures and metaphyseal fraying (Figure 1, a & b), we have gone on to show subdural hematomas first by angiography and now by CT (Figure 2). We recognize rupture of hollow organs such as stomach, gut, or urinary bladder. We diagnose ruptures of the liver or spleen, punctures of lungs by broken ribs, and bleeding into or around organs such as the duodenum, liver, or spleen.

Diagnostic Aids

Special mention should be made about the contribution of CT to the diagnosis of hematomas in the subdural or cerebral areas and in the substance of the liver, spleen, or retroperitoneum, all of which required angiography or surgical exploration for diagnosis in the past. More recently, considerable attention has been focused on the role of radionuclide bone scanning as an adjunct to the diagnosis of skeletal trauma, and although controversy continues about its exact place in the work-up of suspected abuse, it can be said that some fractures and subperitoneal hemorrhages missed early by conventional X-rays will be detected by nuclide bone scanning[9, 10] (Figure 3, a & b).

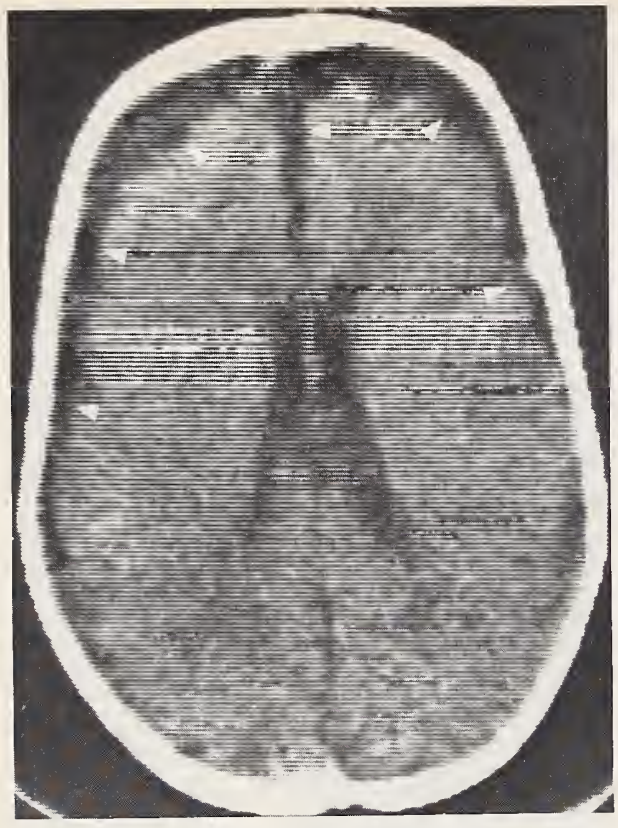


Figure 2 — Computed tomographic (CT) scan of the head of an infant with bilateral and interhemispheric subdural hematomas (white arrows) which result when severe shaking tears veins within the skull.

Summary

Pediatric radiologists have played and continue to play a vital part in the recognition and diagnosis of child abuse. We have at our disposal a vast literature and excellent teaching on the subject. We maintain a high index of suspicion and now have the sophisticated modalities such as CT and radionuclide imaging to augment classical X-ray diagnosis. It is my hope that we will continue, with other physicians who care for children, to teach an ever wider audience about the causes and prevention of child abuse because our ultimate goal is not the diagnosis of child abuse but its elimination.

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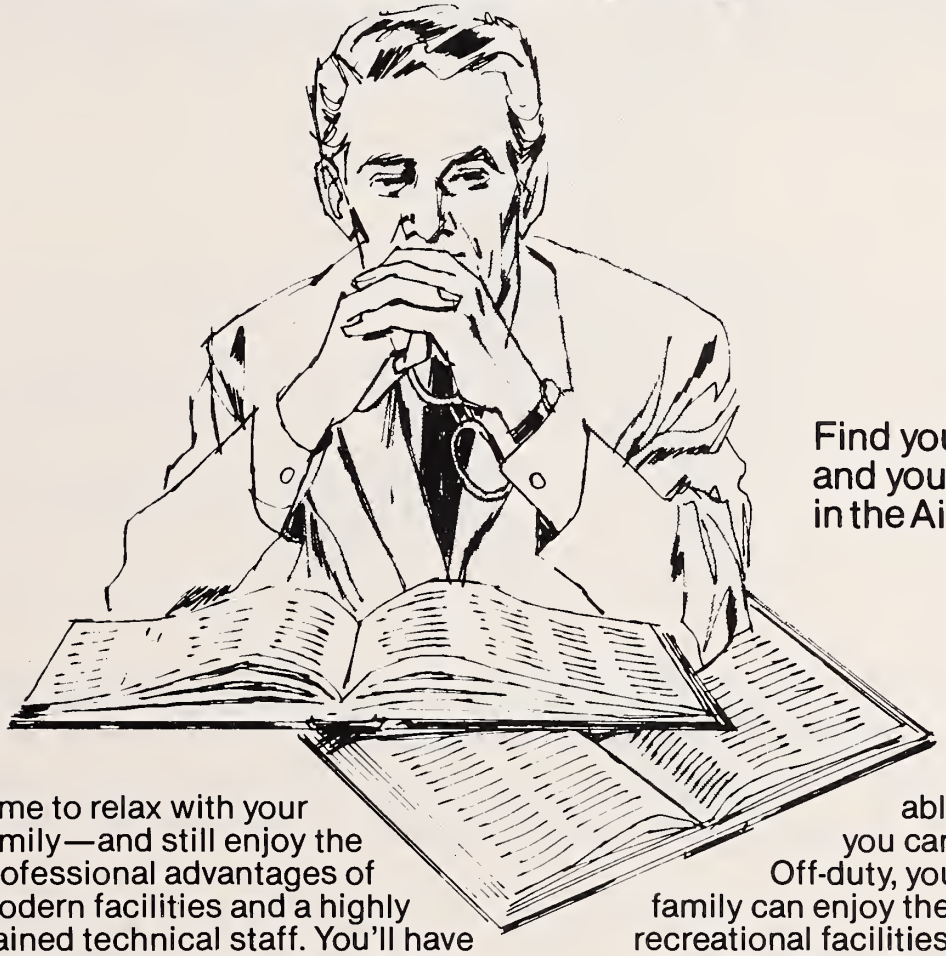
Figure 3b — An X-ray of the same infant's leg obtained 3 weeks later shows periosteal new bone formation along the shaft of the tibia (black arrows) which correlates with the positive bone scan done earlier (Figure 3a).



Figure 3a — A view of the lower extremities from a radionuclide bone scan in which the initial X-rays were negative. There was strong clinical evidence of trauma to the left tibia, and so the bone scan was done. It shows increased uptake of nuclide in the left tibia (black arrows) which in this setting indicated injury to the shaft of the bone.

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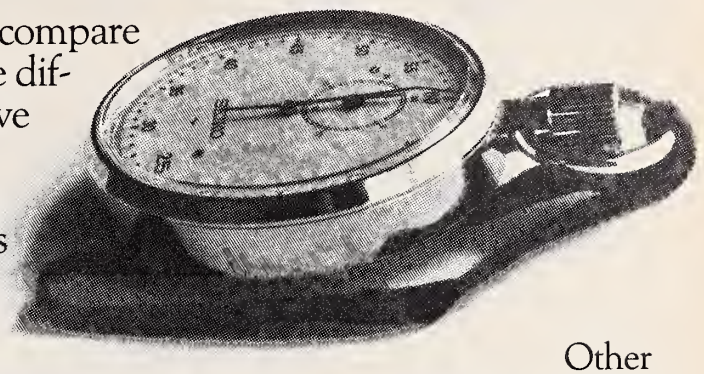
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EPIDEMIC!

Adolescent drug abuse has exploded into epidemic proportions. Parents and professionals alike have been challenged to react positively to change their own awareness and attitudes about this problem.

by Nancy Hillis

A MINISTER from South Georgia was frequently challenged by a parishioner, "Hey, preacher, what do ya know fer sho?" The minister finally found the perfect answer: "One thing I know for sure is that a rattlesnake can't straddle a rail fence."

What can we be sure of? Change. Nothing stays the same. The way we react to change can certainly vary — we can ignore it, resist it, or commit to making it a positive force.

The Epidemic

Drug and alcohol abuse has changed from a personal, adult problem to a medical, social, economic, and political issue. It is startling to see how rapid this change has occurred. Ten years ago, would you have expected to visit a third grade class in your community and find little boys in Cub Scout uniforms and little girls in jumpers learning about drugs that even adults cannot handle? This scene is both terrifying and encouraging — terrifying in that drugs are such a problem even third graders must be prepared to deal with them, and encouraging in that we finally are fighting back to prevent drugs from taking any more of our children.



Nancy Hillis displays some of the materials she uses in her talks on substance abuse. Photo courtesy of Bob Nichols, Chattanooga News Free Press.

The unbridled greed of the drug culture has reached down to tap the youth market. We watched it saturate our colleges, then seep into high schools, then junior high, and finally grammar schools. It is easy for the older child to influence and sell to the younger.

Parent Involvement

Parents were the first to react with imagination and energy. The grassroots parents' movement began in small, isolated, neighborhood groups who came together because their children were smoking marijuana and experimenting with alcohol and other drugs. These parents were not indifferently ignoring nor bull-headedly resisting the change; they were intelligently involved by taking positive action. They embarked on a project that had nationwide ramifications. Out of one of these parents' groups in Georgia, in 1977, two Atlanta parents started the first resource center in the country to focus on the education and mobilization of parents for the prevention of adolescent drug abuse. Two caring parents, Keith Schuchard, Ph.D., and Thomas Gleaton, Ed.D., co-founded the now international organization known as Parent Resources Institute for Drug Education (PRIDE).

Nancy Hillis (Mrs. Charles L.), from Lafayette, is a member of the Wayne County Auxiliary and chairman of Health Projects and Substance Abuse for the Auxiliary to MAG. Send reprint requests to her at P.O. Box 846, Lafayette, GA 30728.

Dr. Gleaton first spoke to our state auxiliary in June of 1980 at our summer board meeting. As a result of the auxiliary becoming aware of the epidemic proportions of this problem, we decided to become actively involved. After receiving approval from the MAG, we started to plan our approach to help effect a change in the drug culture.

Auxiliary Involvement

Our primary purpose in this battle against the adolescent drug epidemic was to draw attention to it, raise people's awareness, and get them involved. That is why as your Health Projects Chairman I decided to first learn all I could and become certified as a speaker by PRIDE. The next step was to travel around Georgia and other states to visit as many drug rehabilitation centers and prevention programs as I could and talk to as many young people as possible. We also obtained a copy of the film "Epidemic" to help carry the message about drug abuse.

Our primary purpose in this battle against the adolescent drug epidemic was to draw attention to it, raise people's awareness, and get them involved.

The things I have seen in the last few years are enough to make the strongest hearts break. I have traveled thousands of miles talking with young people, listening to them, asking them questions, and learning a great deal. They all seemed so anxious to tell me how they got into drugs, who turned them on, and what their lives had been like. They talked about drugs I had never heard of. They had had experiences that were hair-raising. I heard how drugs had killed their hope, their promise, their spirit, and their love. Drugs had turned them against their friends and families and toward a world of pain and isolation. The result was always the same. They wished they had never gotten involved with drugs. They wanted more than anything else to re-establish their relationship with their families and have a normal, happy life again.

Right now, adolescent drug abuse is like one of those dread diseases for which there is no cure. It crosses all boundaries. Rich and poor are not immune. Neither are the educated or uneducated, black or white. Drugs have invaded the rural areas across America as well as the cities.

Our top priority is prevention. It is safer and more effective to thwart drug abuse before it begins, than to wait until after the fact and hope the young person will come in for treatment — an emergency procedure in which we sometimes lose the patient.

We do this by helping to organize and promote "town meetings" where we bring together community leaders and parents to make them aware of the epidemic in their own town. We enlist and support our schools in getting adequate drug education to students. Our county auxiliaries have been very creative with all sorts of projects, which have included puppet shows, coloring books, health fairs, films, and use of local media.

The good news is that the professionals tell us it is working. Our efforts are producing important, positive results. Three representatives from Charter Brook Hospital in Atlanta, the first private hospital in Georgia developed exclusively for treatment of addiction in adolescents, spoke at the auxiliary's summer board meeting in August of 1984, at St. Simons Island. They told us that parents are becoming more knowledgeable and open about adolescent drug abuse, and are recognizing that drug abuse *is* a problem and not a symptom.

Treating the Addicted Adolescent

A healthy adolescent learns via experimentation, not necessarily with drugs. In many ways, behavior is to an adolescent like thinking is to an adult. They try it first, then look back and think about the results and reactions of what they have already done. It is like a child who breaks a window just to see what happens. He then finds out the reaction and penalty he has to pay. It is natural to learn and experiment in growing. The problem with experimenting with a drug is you don't learn from the results. The effect is intoxication. You don't learn from intoxication. That is why it is so complicated. The result of experimentation is a crazy trap.

Mark Jaccard, Director of Aftercare, at Charter Brook, states that knowledgeable parents are now more able to recognize adolescent hostility and distinguish whether it is drug related or just normal clear-headed hostility. As a result, they are getting young people into treatment much earlier, which naturally means a higher rate of recovery. Mr. Jaccard says, "We are finding that with kids, Aftercare is as important as treatment. First we have to treat the disease of addiction, then the disease of adolescence from which we are all recovering with various degrees of success." In Aftercare programs, kids not only attend A.A. meetings; they also learn how to have fun, how to be a kid again and regain some of those learning and coping experiences once lost to drugs.

Physician Involvement

We need the active support of the medical community, including physicians who have no primary medical concern in adolescent drug and alcohol abuse, such as surgeons, ophthalmologists, gastroenterologists, etc. In a country with an estimated 3 million adolescent alcoholics,[1] all pediatricians are, almost certainly, seeing at least a few, and so are other specialists. One pediatrician says he never "saw" a drug abusing youngster — until his eyes were opened to the problem by the deep involvement of his own teenage son. "Now, I see it all the time."

Youth Involvement

One of the most promising events to come out of the change in the drug culture is that young people are now starting to form their own clubs that combat the negative peer pressure to use and drink. They are learning how to say "no" to the constant onslaught of "do-drug" messages. These clubs, formed in schools, consist of "straight" youths who want to help others stay straight. They are children who encourage other children to avoid drugs.

The reasons for using drugs are being emphasized too much, while

the reasons for *not* using them are not being hit hard enough. These young people are helping to develop an attitude in school that it is not "cool" to use drugs or alcohol. With assistance from groups like SADD, MADD, RID, PRIDE, DeKalb Families in Action, medical auxiliaries, Junior Leagues, and Lions Clubs, etc., these children are given good information to help them find alternatives to drugs. They sponsor drug-free parties and events in school, and support having fun without drugs.

The good news is . . . our efforts are producing important positive results.

I am often asked if I think we are really making any progress in the war against drugs. Let me assure you, we are! The national average of the incidence of adolescent abuse has leveled off in some drugs and decreased in others. This probably still reflects the highest levels of illicit drug use to be found in any nation in the industrialized world.[2] When measuring success on the scale of children's lives to be saved, what measure is significant?

For more information, contact the author at 404-638-5695; or PRIDE at 1-800-241-7946 for a free information packet; the National Federation of Parents for Drug-Free Youth, 1-800-554-KIDS, for lobbying against the movement to legalize marijuana; and cocaine hotline, 1-800-CO-CAINE.

Suggested material which may be ordered from PRIDE: "Keep Off the Grass," by Gabriel G. Nahas, O.B.E., M.D., Ph.D.; "Drugs, Drinking and Adolescents," by Donald Ian Macdonald, M.D.; "Pot Safari," by Peggy Mann; and "Drug Abuse — A Guide for the Primary Care Physician," by the AMA, Chicago, IL, Order Department OP-323.

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REYE SYNDROME

Reye syndrome is a ***rare but dangerous*** condition that can develop from ***flu or chicken pox.*** It occurs mainly in ***children under 16,*** usually when they ***appear to be recovering.*** Watch for these signs:

- ***Persistent vomiting***
- ***Fatigue***
- ***Confusion and belligerence.***

If your child displays any of these symptoms, ***consult a doctor immediately.***

Some studies indicate that there may be an association between the use of ***aspirin*** for flu and chicken pox and the development of Reye syndrome. Further studies are being conducted on this possibility. In the meantime, the ***U.S. Surgeon General*** suggests that you check with your doctor before using aspirin or any medication when your child has flu or chicken pox.

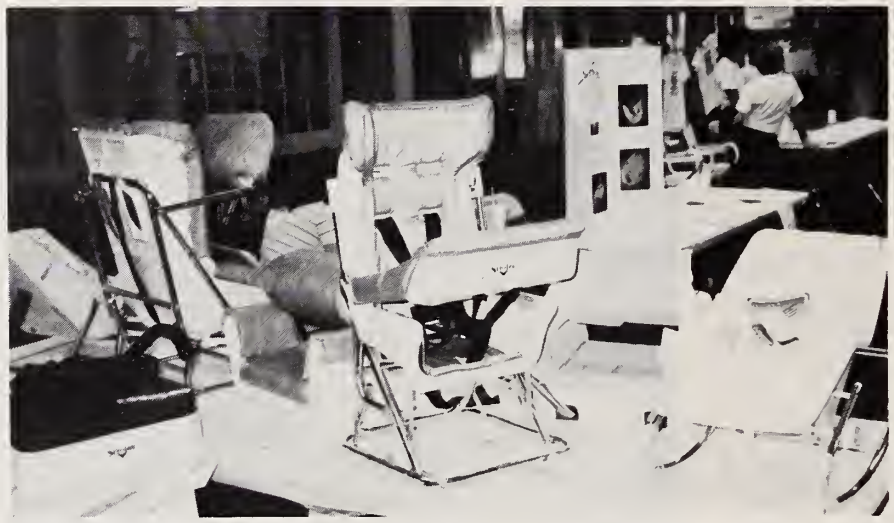
—A message from the Food and Drug Administration.

Safety And The Child

Since July 1, 1984, safety seats are mandatory in Georgia for all children under 4 years of age while riding as passengers in a car, van, or pickup truck.

by Nancy McCord

In addition to child abuse, 1984-1985 is a significant year for accidental childhood injuries. A major cause of injuries to children remains automobile accidents. Fortunately, a Georgia law which became effective on July 1, 1984, mandates safety seats for all children under 4 years of age while being transported as passengers in an automobile, van, or pickup truck registered in the state.



During Children's Week, Bibb County Auxiliary had approved child restraint seats on display at a Macon mall.

There are approximately 50 car safety seat rental and purchase programs available to the public throughout the State of Georgia, but more are necessary to meet the need. Several county auxiliaries have projects involving car seat safety for children. In ***Bibb County,*** a safety committee was organized in early March of 1984 to work on a Media Blitz to publicize the need for the Child Safety Restraint Law. During a 4-month period, a tireless work force of nine core members carried out the various aspects of the program. This group was made up of the following auxiliary members: Linda Bell, Tanya Erickson, Patti Harrison, Charlotte Hope, Betty Huckaby, Julia Jones, Eugenia Peskoe, Connie Phelps, and Beverly Noller. In addition, many other auxilians worked on individual phases of the blitz.

Below are some of the accomplishments of the ***Bibb County Auxiliary:***

1. 1,000 information packets were distributed during a 2-hour road block held with the Macon Police Department.
2. Letters and information packets and ideas for informing various people of child safety needs and requests for donations to the Baby Buckle-Up Program were furnished to the following:
   a. 247 churches in Macon
   b. More than 300 MDs of the Bibb County Medical Society
   c. Every insurance agency and company in Bibb County
   d. Every car dealership
   e. 200 businesses
   f. Every civic/volunteer organization
3. Over 1,600 packets of information were hand delivered to every family with children in day care centers in Macon.
4. In-house sales of car seats prior to July were compiled with Wilson's, Segall's, and J. C. Penney's.
5. PSA announcements were sent to 15 radio stations and were personally heard on three separate stations.
6. Two radio interviews were given "live."
7. Four TV shows (½ hour each) were planned for two stations.
8. Five news spots or stories were offered to two TV stations.
9. Two lengthy articles appeared in a local newspaper.
10. Two-day car seat display/information booth was set up at Macon Mall.
11. Mayor George Israel proclaimed July 8-14 "Child Safety Restraint Week in Macon/Bibb County."
12. Donations of over $1,200 were collected in 3 weeks.
13. 50 new toddler seats are now on order for the Baby Buckle-Up Program.
14. A physician donated a TV and video recorder to the Health Department for showing of the safety restraint film.
15. In late June, over 70 requests had come in for loan of seats from the Baby Buckle-Up Program. All seats available were distributed.

The Baby Buckle-Up Program in Bibb County was the cooperative project of 3 main sponsors — The Macon-Bibb County Health Department, the Auxiliary to the Bibb Coun-

Nancy (Mrs. J. William) McCord, a member of the Richmond County Medical Auxiliary, is safety chairman of the A-MAG. Also contributing to this article were Ann (Mrs. William R.) McWhirter, of Columbus, and Beverly (Mrs. Stephen) Noller, of Macon.

ty Medical Society, and the Pilot Club of Macon.

The ***Auxiliary to the Medical Association of Atlanta*** honored metro Atlanta physicians on Doctors' Day by presenting an infant car seat to the first baby born in the area on March 30.

There are about 50 car safety seat rental and purchase programs available in Georgia and more are needed.

One of the most extensive and successful safety programs was carried out in Muscogee County. The ***Auxiliary to the Muscogee County Medical Society*** formed "Project Love Seat, Inc.," a non-profit corporation which established an infant seat loan program with 50 federally approved infant safety seats in October, 1983. The project was highly publicized. Staffed by volunteers, an office at the Medical Center is open 3 mornings each week. For a $25 deposit, parents may rent an approved infant safety seat which is theirs to use until the baby has outgrown it. When the seat is returned, $20 of the deposit is refunded.

This project was the silver bowl safety award winner at the 1984 AMAG convention held in Atlanta in April.

Recently, ***Muscogee County Auxiliary*** has concentrated on making parents aware of the legislation and of the importance of protecting their children with safety seats. Many of their efforts have been in cooperation with the Muscogee County Cooperative Extension Service which has a special agent financed by a grant from the Office of Highway Safety to spearhead a public information campaign. The first cooperative effort was a display on the law and child restraints at the 2-day Salisbury Fair.

Project Love Seat then sponsored a contest in cooperation with the newspaper. Students in kindergarten through 6th grade were asked to draw a poster or write a letter about the importance of restraining infants and toddlers in safety seats while riding in motor vehicles. Six cash prizes were awarded in three categories. Many teachers made this contest a class project.

Numerous efforts have been made to increase public awareness. The "Good Day" show featured a physician and his wife buckling their three children into an infant seat, a toddler seat, and a booster seat. The month of June was proclaimed "Show You Love 'Em, Buckle 'Em Month" by the mayor of the city. At a press conference held to launch the campaign, an infant safety seat was presented to Project Love Seat by the mayor.

Later, auxilians were quoted and/or featured, with their children restrained in safety seats, in four lengthy newspaper articles written to explain the law and to provide information about child restraints. Again, the auxiliary participated with the Cooperative Extension Service in an all-day display at a shopping mall.

Several county auxiliaries throughout the state are carrying out their own safety programs and endeavoring to increase public awareness of the child seat belt law.

Project Love Seat now has 150 infant seats in the program. Since the project was established in October, 1983, a total of 248 seats have been rented and 109 have been returned. Forty-eight percent of these 248 rentals were made in the 9 months preceding the child restraint law; 52% have been rented since July 1.

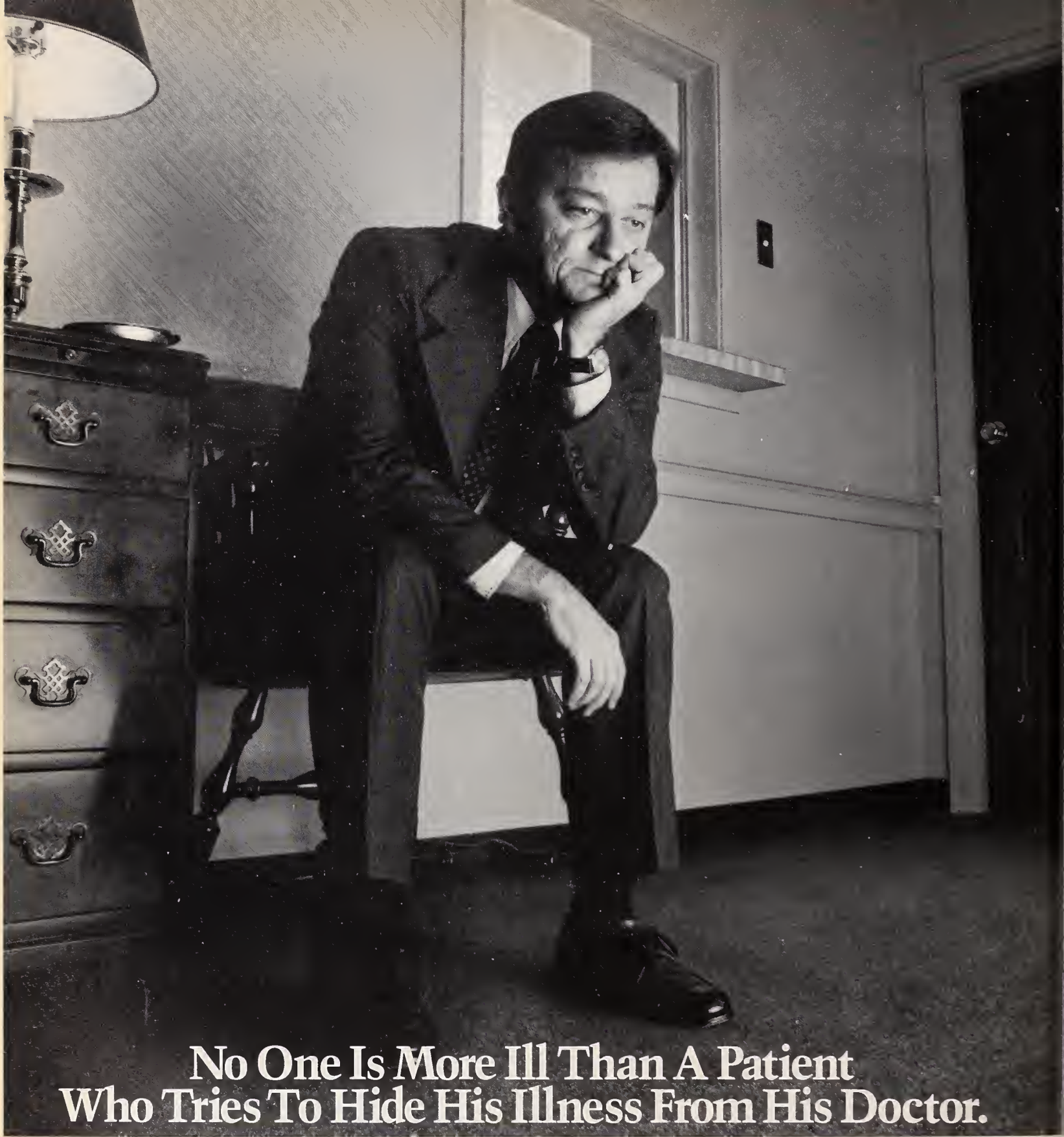
Plans initiated by the Muscogee Auxiliary are under way for a toddler seat loan program to be established at the Columbus Health Department early in 1985. Auxilians are cooperating with the health department in developing their rental procedures, training their personnel, providing seats to establish the program, soliciting funds for additional seats, and publicizing the program.

We should be aware of the need to strengthen and improve our safety legislation.

The ***Whitfield-Murray Auxiliary*** is another county group participating in the Loaner Car Seats for Children Program. In addition to having 53 car seats for loan, members of the auxiliary contacted the Dalton School Board to appeal for the installation of seat belts in school buses. This appeal coincided with a letter written to "Dear Abby" by Dr. Robert Burns of Dalton, stating the need for seat belts on the public school buses. As a result of these efforts and those of other concerned citizens, Dalton now has all its city school buses equipped with seat belts.

Other county auxiliaries over the state are carrying out their own safety programs. The ***Auxiliary to the Tift County Medical Society*** has a fire safety program which they give in all local kindergartens in Tift County, in addition to their "Car Seat Loaner" program.

Safety for our children is an issue that needs constant attention. We have made a start with the passing of the mandatory car seat law. We should be aware of the need to strengthen and improve our safety legislation. We must protect our most valuable resources — our children.



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Georgian To Lead American Pediatricians

by Evelyn Ward Gay

"The biggest thing pediatricians can do is to recognize cases (of child abuse) that come to their offices and get them to the right place for help before worse takes place."



Dr. Martin Smith

THERE PROBABLY IS no one person in Georgia who is more interested in or involved with promoting the welfare of children than Dr. Martin Smith of Gainesville. Underscoring this long-standing dedication will be his installation as President of the American Academy of Pediatrics (AAP) at the annual meeting of that group to be held in San Antonio, Texas, in October, 1985. He will be the first physician from Georgia to hold this position in the 55-year history of the AAP, an organization that reaches pediatricians "from Canada to the southernmost tip of South America."

During the past year as president-elect of the 27,000-member Academy, Dr. Smith has spent a great deal of his time in Washington, D. C., testifying before Congress concerning legislation that directly affects the children of our country. The most recent problem under consideration by a House subcommittee has been adequate compensation for any child who has an adverse reaction to immunizations.

Vaccine Legislation

"There are laws in all states now that require immunization before entering school," says Dr. Smith. "These are good laws. If we don't have good laws like this, we are going to have preventable diseases. This was true before 1976. In 1976 the government took the initiative to bring the level of immunization to 95% by putting pressure on the states to tighten requirements for children entering school for the first time. Now the level is better than 95%."

Without these requirements, Dr. Smith points out, we wouldn't have this level. But, at the same time, he acknowledges that "vaccines have known risks, and although the risks are very small, some children are injured." This is inevitable, however, he says, and it is the Academy's contention that if a child is injured, the public has a duty to see that the child is protected.

Pediatricians have been pushing for this kind of law for the past 7 years, he says, and the major concern is trying to get reasonable justice promptly without going to court. Drug firms are for it, he states, but working out a satisfactory solution has been difficult.

Evelyn Ward Gay (Mrs. Brit B.) is a member of the Auxiliary to the Medical Association of Atlanta and a former editor of *Pulse Line*. Send reprint requests to her at 911 Vistavia Circle, Decatur, GA 30033.



Dr. Martin Smith testified in Washington, D. C., before a House subcommittee on DTP vaccine shortage. (Photos courtesy The American Academy of Pediatrics, Elk Grove Village, Illinois.)

Assuring that there is an environment under which drug companies can still produce vaccines is another problem, says Dr. Smith. Only two companies are still in the production of vaccines. At one time, there were six or eight furnishing DTP vaccines; now there is only one. There were four producing polio vaccine; now there is one. The same company produces both polio and DTP vaccines. Four companies previously produced measles vaccine; now only one does.

Dr. Smith believes that the government should take care of this problem. However, he does not see a solution coming this year, but eventually he thinks it will come.

Insurance Discrimination

Another goal of our nation's pediatricians is to obtain legislation on the tax code, explains Dr. Smith. Most health insurance in this country is purchased by industry and provided to employees of industry as fringe benefits. This is not taxable to employees; industry deducts the cost of the insurance. And under this type coverage, there is discrimination against children. Most insurance provides for hospital care of the employee and his/her family, but most care for children is preventive care and takes place outside the hospital. So the child is not covered, and therefore is penalized by the insurance program.

"Baby Doe"

On another matter affecting pediatricians, Dr. Smith hopes that "the Baby Doe issue has been put to rest." The latest guidelines are "an acceptable compromise" worked out by the Academy and other interested organizations. But, he believes, pediatricians will be able to function under it for the present and do the best job they can.

"It is late," declares Dr. Smith, "and if it had come earlier, we could have prevented the Baby Doe incidents."

Child Abuse

As for child abuse, a major concern of everyone who cares for children, Dr. Smith sees this problem

as one that has accelerated because of "a relatively new realization that sexual abuse is more widespread than before suspected."

The Academy and its state affiliates, however, have been involved in the problem of abuse of children for a long time. The original law passed in Georgia for reporting suspected cases of child abuse was sought by the Georgia Pediatric Society, and was passed when Dr. Joseph H. Patterson, of Atlanta, was president of the group in the early 1960s. This was about the time Dr. Henry Kempe, Chairman of the Department of Pediatrics at the University of Colorado School of Medicine, wrote about "The Battered Child Syndrome."

In the late 1950s, Dr. Smith relates, he saw a child who had been severely battered and had died of his injuries. He recognized it as a case of abuse, and the thought struck him that "it was not being dealt with in Georgia as it should be." At that time, Dr. Howard Morrison was president of the pediatric group in Georgia, and Dr. Smith was chairman of the committee on infectious diseases. Dr. Smith wrote to Dr. Morrison and suggested that the chapter do something about reporting. This started the movement for legislation to be introduced in the state assembly. Dr. Patterson presented testimony in an attempt to get incidents reported to the proper agencies in the state in order to protect the child victims. He helped to write the law which eventually was introduced and passed by the state legislature.

Dr. Smith sees the role of the medical auxiliary as chiefly one of "educating the community in which the members live about the problem of child abuse and what concerned people are trying to do about it."

"Georgia's law was one of the early ones," says Dr. Smith. "Some other states already had a similar law. Since then, ours has been altered and improved for the holes in it."

Dr. Smith was asked how a primary physician can suspect the possibility of child abuse or neglect in a patient. He agrees with the usual methods: parent-child interaction, conflicting stories, history of repeated trauma, and lack of proper concern by a parent. But he adds to the list: "Or too much concern." The main thing, he says, is that "descriptions of circumstances don't jibe with the findings."

What can pediatricians (or other physicians) do to help teach patients (parents) to learn the right way to care for children? Dr. Smith says that "the biggest thing pediatricians can do is to recognize cases that come to their offices and get them to the right place for help before worse takes place." He also emphasized the now-recognized fact that more often the abusing parents are ones who were abused themselves. "They have grown up thinking abuse is the norm. If we can break the cycle and get help and rehabilitation for them, we can stop them from abusing their own children," says Dr. Smith.

Personal Background

Dr. Martin Henry Smith (named for his two grandfathers) was born in Gainesville as a member of the fifth generation of his family in the northeast Georgia town. He grew up there and attended the public schools before enrolling at Emoty University in Atlanta. After completing his undergraduate education, he went on to the Emory University School of Medicine where he received his M.D. degree in 1945. He served his internship in the City Hospital System in Winston-Salem, N. C., spent 2 years in the U. S. Armed Services as a captain, and thereafter completed an infectious disease fellowship at Grady Memorial Hospital in Atlanta. His pediatric training was obtained at the Henrietta Egleston Hospital for Children in Atlanta and at Children's Hospital, Washington, D. C. He has been in the private practice of pediatrics in Gainesville continuously since 1951.

Dr. Smith is a member of the Hall County Medical Society, the MAG, AMA, a licentiate of the American Board of Pediatrics, and a Fellow in the American Academy of Pediatrics since 1952. In 1960, he served as President of the Hall County Medical Society, and was Chief-of-staff of the Hall County Hospital in 1965-66, during which time he also served as President of the Georgia Pediatric Society.

He was a member of the AAP's Self-Assessment Committee, 1969-70; on the Council of Pediatric Practice (at large), 1970-73; chairman, Council of Pediatric Practice, 1973-77; on the Legislative Issues Committee of the AAP, 1975-77; the Task Force on Immunization Policy, 1975-78; and on the Editorial Advisory Board for *Pediatric News*, 1979-82.

Dr. Smith is Clinical Assistant Professor of Pediatrics at the Emory University School of Medicine, and his hospital staff affiliations include the Northeast Georgia Medical Center in Gainesville and Grady Memorial Hospital in Atlanta.

He is married to the former Mary Gillis, of Soperton, and they are the parents of three daughters and grandparents of three boys and one girl.

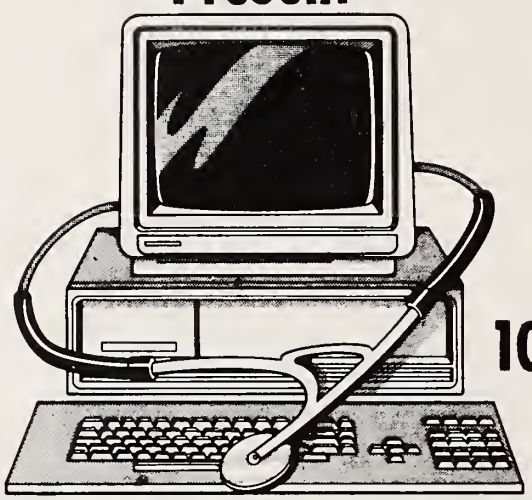


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Auxiliaries Brighten Many Rainbows

by Barbara Tippins

It would not be far afield to say that auxiliaries to the county medical societies over the state are the means by which some dreams are made to become realities, some wishes fulfilled, some needs are met, especially when these dreams, wishes and needs are health care and health education oriented. The auxiliaries, under the direction of the medical societies, have endeavored to fulfill some of the following needed community projects related to health education and safety.

Child Abuse

The auxiliaries' presentation of the puppet show as part of the "It's OK To Tell" child abuse joint project of the MAG and the Department of Human Resources campaign have been discussed in depth in separate articles in this *Journal* issue.

In addition to the above, the ***DeKalb County Auxiliary*** hosted a reception at Callanwolde, the county's Fine Arts Center, for the DeKalb Sexual Abuse Task Force as the culmination of a day-long seminar. One hundred and fifty members of this force attended this special event. The **Georgia Medical Society Auxiliary** (Savannah) and the Department of Family and Children Services held a seminar called "A Brown Bag Work Symposium" for health care personnel, teachers, law enforcement officers, attorneys, and social workers. A target group viewed a training series taped by Dr. T. Bensel on how to recognize and assist the abused child. Every Thursday in March and April was set aside for various groups to be shown this tape. Participants bring their own lunches in brown bags and the auxiliary furnishes the beverages. Another child abuse related project was ***Muscogee County Auxiliary's*** auction with lawyers' wives which raised over $2300 for the Anne Elizabeth Shepard Home.

The ***Richmond County Auxiliary*** is represented on the Augusta Community-Based Child Abuse Council established to help the community focus attention on this problem. The Council is composed of representatives from the Junior League, Medical College of Georgia's University Hospital, the Dwight D. Eisenhower Army Medical Center at Fort Gordon, the Department of Family and Children Services, and Social Services Department, Juvenile Court. Some of the activities of this Council are: the development of a manual listing all the agencies that intervene in cases of child abuse; holding seminars directed at educating the general public and professionals on child abuse and its ramifications — the problem, the prevention and the treatment. A family-centered treatment is emphasized and support groups have been established.

Impaired Physicians Program

The Impaired Physicians Program, inaugurated in 1974 and based at Ridgeview Institute in Cobb County, is nationally acclaimed and has become a leading role model for similar programs all over the United States. The program has outlined its objectives as the four Rs — *R*each, *R*ecovery, *R*ehabilitate, and *R*e-entry. Through the years, auxiliaries over Georgia have felt the keen need to lend aid to this program by contribut-

Barbara Tippins (Mrs. William C., Jr.), 2nd vice president and projects chairman for the Auxiliary to MAG, is a past president of the DeKalb Auxiliary and a former co-editor of *Pulse Line*. Send reprint requests to her at 1772 Tamworth Court, Dunwoody, GA 30338.

ing money, furniture, appliances, linens, china, cookware, and any needed items to make the physicians' stay more comfortable.

At their October meeting, the ***Auxiliary to the Cobb County Medical Society*** had a money tree for the benefit of the Impaired Physicians Program. Three hundred dollaws was collected from this tree and contributed to the project. A house plant and decorative poster "shower" was held in Feburary by the ***DeKalb County Auxiliary,*** and these cheerful gifts were added to the existing furnishings of the living quarters of the physicians. In November, the ***Tift County Auxiliary*** donated gift items to the Homes for Impaired Physicians.



The Resource Center of the Muscogee County School System is a popular spot for obtaining materials from the MAG Auxiliary's Learning Center. Sarah (Mrs. Lawrence J.) Freant (right foreground) works with teachers and other auxilians while a local newsman looks on.

Drug Abuse

Substance abuse is a devastating problem and has long been a major concern of the auxiliaries. This year the Auxiliary to the MAG has as one of its major projects a community-based plan of action for drug abuse prevention. An article in this issue of the *Journal* deals with this timely project, but mention should be made of ***Richmond County Auxiliary's*** participation in ARCADE — the Augusta Regional Coalition for Alcohol and Drug Education. ARCADE is composed of numerous groups including the Junior League, Red Cross, Police Department, MADD, SADD, Board of Education, Mental Health Department, and the University Hospital Alcohol and Drug Unit. The purpose of this coalition is education of the community on substance abuse. A Drug Awareness Week began March 25 with a seminar focusing on adolescents and substance abuse. The keynote speaker was Dr. Orvin, Chairman of the Department of Psychiatry at the Medical College of Charleston. He addressed the general community as well as professionals. Included in the week-long activities were television shows, radio announcements, and newspaper articles, climaxing on Friday and Saturday with a display at the mall. Information on drugs, drug abuse, and the various agencies in ARCADE was made available, including videos and films. The puppet show, "Drugs Are A Drag," was presented by the ***Richmond County Auxiliary*** several times during these 2 days. The Davidson Fine Arts Magnet School in Augusta gave a production concerning drugs and drug abuse to help individuals and their families know how to deal with the problem. The ***Whitfield-Murray County Medical Auxiliary*** helped to organize the Dalton chapter of Mothers Against Drunk Driving (MADD).

Legislation

Establishing a "Key Contact Person Program" was felt to be vital in making strong and lasting friendships between the physicians and their lawmakers and their spouses. A Med-Vote and Registration Project was launched this year in an all-out effort to get physicians and their families registered and out to vote their convictions. The ***Auxiliary to the DeKalb County Medical Society*** and the ***Auxiliary to the Georgia Medical Society*** (Savannah) actively participated in this drive. The ***DeKalb County Auxiliary*** continued the legislative emphasis by having a program on the "Drinking Age" bill.

"A Capitol Idea" was the statewide legislative project planned by Mrs. William C. (Jan) Collins, of Atlanta, Legislative Chairman of the Auxiliary to MAG. February 19 began with a coffee followed by a private tour of the Governor's Mansion conducted by the Governor's wife, Mrs. Elizabeth Harris. Afterwards, the auxilians were taken by buses to the state capitol to visit with their legislators and sit in on some of the sessions of the House of Representatives and the Senate. Some of the female legislators found time out from their busy day to be guests of the auxilians for lunch. Some of the members of the ***Auxiliary to the Medical Association of Atlanta*** opened their homes to out-of-town auxilians having to stay overnight in Atlanta for this event.

The ***Thomas Area Medical Society*** and the ***Auxiliary*** cohosted a dinner in November featuring Congressman J. Roy Rowland, a physician from Dublin, Ga., as guest. He spoke on Legislative Awareness. The Honorable Charles Hatcher also attended and participated in a question and answer session. A Media-Legislative dinner, hosted jointly by the ***Tift County Medical Society*** and the ***Auxiliary*** was held in October. Physicians from neighboring counties and their spouses were invited. Seven members



Left ro right: Jane Taylor, Pam Newton, Ann Smith, and Sara Beecham place checks on a money tree in Cobb County Auxiliary's drive to raise funds for the Impaired Physicians Program.

of the local media and legislative representatives were present.

Community Service Projects

Community service projects are as diversified as the counties themselves. The ***Bibb County Medical Society*** and the ***Auxiliary*** participated in a one-day mini clinic at the Bibb County Sheriff's Department. Physicians gave mini-physicals to employees and the auxilians assisted them with the paper work and by drawing blood and providing nursing skills. ***Bibb County*** physicians, their families and friends cooperated in a special blood drive conducted by the American Red Cross in February by donating blood to this worthy cause. The auxilians also provide volunteers for clerical duties at the Hospice, and some members have taken the advocate course in assisting the Hospice. The ***DeKalb County Auxiliary*** donated the proceeds (approximately $3000) from their Holiday Sharing Card to the DeKalb County Health Department for the purchase of eye glasses for children who otherwise could not obtain them. The ***DeKalb Auxilians*** also drew names of children furnished to them by the Department of Family and Children Services in November and purchased one big gift wanted most by each of the children. The gifts were brought to the December meeting for collection and dispersement to the Department in time for the children to have them on Christmas morning. A tennis tournament was sponsored by the ***Auxiliary to the Georgia Medical Society*** (Savannah) with over $400 raised and donated to the S.A.F.E. Shelter. The ***Muscogee County Auxiliary*** furnished a magician to entertain patients on the children's ward at the Medical Center Hospital during Halloween week.

The ***Tift County Auxiliary*** assisted in outfitting a newly opened Shelter for Abused Women and Children. They donated a pick-up truck load of items ranging from tricycles and toys to bed linens and kitchen needs. Some of the auxilians have received training in manning the "hot lines" for abused women; others have volunteered time, money, food, and medical assistance for the shelter. Seventy-five percent of the members participated in this effort. In the Spring, the ***Tift County Auxiliary*** will assist in a special Olympics event and a County Health Fair. The ***Tift County Auxiliary*** had their annual Community Outreach Christmas Project. They purchased and delivered clothes, toys, and food to approximately 40 local needy children and their families on the day before Christmas. The ***Whitfield-Murray Auxiliary*** held their annual Christmas Auction and raised over $1000 which was dispersed in the Dalton community. This auxiliary also maintains a Wig Bank

at the local hospital for patients undergoing chemotherapy. This is a service which improves the physical appearance of these patients and brightens their outlook on life.

Health Education

Basically, nearly all the programs and projects of the Auxiliary are educational to some extent, but some programs are specifically designed for Health Education, targeted for different age groups. An enterprising and innovative "Nursery News," a newsletter which gives information for four age groups (1 to 3 months; 4 to 6 months; 7 to 9 months, and 10 to 12 months) was developed by the ***Bibb County Auxiliary*** and the Bibb County Health Department. A series of newsletters are mailed to mothers quarterly in Bibb County. Each newsletter contains information about growth and development, safety, nutrition, a column by a local pediatrician, as well as numerous helpful hints. The Bibb County Health Department has been contacted by several Health Departments in Georgia requesting use of the Newsletter. Sharing is part of the benefits of this project.

A Good Emergency Mother Substitute Program was presented by the ***Georgia Medical Society Auxiliary*** (Savannah) to 13- and 14-year-olds in two public schools in Savannah. These programs were reported by the local television stations and newspapers. As a result, the Auxiliary has been contacted by a Hilton Head, S. C. hospital group asking for speakers and help in organizing a similar program there. The public schools in Savannah are considering adding a GEMS program to the schools' curricula.

"Dinner with the Designer — Victor Costa" was a money-making event conducted in October by the ***Auxiliary to the Medical Association of Atlanta.*** Designer Costa narrated a fashion show of his holiday designs. A thousand dollars was raised for the Allied Health Scholarship Fund.

The ***Newton-Rockdale Auxiliary*** attended "An Old Town Festival" in Conyers and sold finger print pictures



A reception was held by the DeKalb Auxiliary at Callanwolde at the end of a day-long seminar for the Sexual Abuse Task Force. Left to right, Carol Ann Hardcastle and Carole Apgar attended with 150 members of the force.



A mini clinic was held at the Bibb County Sheriff's Department where auxiliary members assisted the physicians by providing paper work and nursing skills. Shirley Lanford (center) and Dora Mayes are shown here with a member of the sheriff's department.

and surprise gifts from baskets to raise money for projects. For Organ Procurement Week, they placed flyers and information sheets in all doctors' offices. This auxiliary also held a Gourmet Salad Luncheon for the public as a fund raiser to purchase Phase III of the Learning Center for the school systems of the area. All the materials in Phase III are designed to improve a self concept, values, and awareness which will help to prepare children to cope successfully with life stresses such as peer pressure, divorce, death, alcoholism in family members, child abuse, etc. Dora Mayes (Mrs. Alva L., Jr.), State Chairperson for Mental Health, and Sarah Freant (Mrs. Lawrence J.), Chairperson of the Learning Center, are working together in the presentation of this material.

The ***Peach Belt Auxiliary*** held its third annual Valentine Charity Ball for the benefit of education oriented facilities, with a goal of $6000 contributed by local physicians, attorneys, and businessmen who attended the black tie event.

Nutrition

Good health and good food go hand in hand. Several auxiliaries planned programs with this in mind. "A Culinary Hearts Kitchen Course" sponsored by the DeKalb County Health Department was endorsed and publicized by the ***DeKalb County Medical Society's Auxiliary.*** Developed by the New York Branch of the American Heart Association, this course is offered to the public to teach nutritious and healthy methods of preparing food. The Auxiliary's low cholesterol cookbook, *A Way of Life,* was sold in conjunction with this project. "Cooking With Herbs for the Health of it" was featured by the ***Georgia Medical Society Auxiliary*** (Savannah). "Brunch With Ursula" was held in February by the ***Auxiliary to the Medical Association of Atlanta*** at Ursula's cooking school. Ursula, a creative cooking authority, prepared, served, and shared her recipes at this fun brunch. The ***Thomas Area Auxiliary*** had a program on Oriental Cooking.

AMA-ERF

Georgia auxiliaries, like all her sister auxiliaries over the United States, held various fund raising events and donated the proceeds to AMA-ERF. Medical students, medical colleges, and medical research departments are the recipients of these funds. The ***DeKalb County Auxiliary*** set sail on the "S. S. DeKalb" for a wine-tasting cruise. The auxilians furnished their favorite hors d'oeuvres to go with the



Tift County Auxiliary held a welcoming coffee and increased their membership 11% over last year. Shown left to right at the event are: Karel Forester, Brenda Guest, and Peggy Dill with Wanda (Mrs. Don W.) Roberts, president; Alice (Mrs. John H., III) Dorminy, secretary; Kay (Mrs. C. Granville) Simmons, president elect; and Becky (Mrs. James W.) Scott, treasurer.



Members of the Tift Auxiliary donated items to supply the newly opened shelter for battered women and children. Loading a truck are: Carol Hurst, shelter director; Wanda Roberts, president of the auxiliary; and Kay Simmons, president-elect.

carefully selected wines. This fund raising event has become an annual affair and produces the bulk of funds raised for AMA-ERF. The sale of gift wrapping paper is another favorite fund raiser. An auction of homemade baked goods and crafts netted $700 for the ***Auxiliary to the Medical Association of Atlanta*** at the group's Christmas luncheon. The auxiliary also raised $1000 for AMA-ERF through the sale of gift wrapping paper. Holiday sharing cards were used by the ***Thomas Area Auxiliary*** to raise $990 for AMA-ERF. The ***Tift County Auxiliary*** used the sharing card to raise funds, as well as the Silent Auction they held earlier in the year.

Membership

Maintaining and increasing membership in the Auxiliary has always been a priority, but this year it is being stressed even more. Georgia has been challenged by Alabama to see which state can produce the greater percentage increase in membership. A Valentine Dessert Party honoring newcomers was held by the ***Auxiliary to the Medical Association of Atlanta.*** Champagne, sweets, and nostalgia along with romantic music welcomed the new and prospective members. The ***Thomas Area Auxiliary*** held a membership drive and produced a 142% increase over last year — from 14 members to 34 members. The ***Tift County Auxiliary*** held a welcoming coffee for prospective members and increased their membership by 11% over last year. The ***Whitfield-Murray Auxiliary*** launched new "mini-dinners" for groups of seven auxilians and their spouses, the purpose being to bring older and new members together in a relaxed, social atmosphere which would provide the opportunity for them to get to know one another. Good food and great company produced very successful evenings.

Postponing Sexual Involvement

The ***Bibb County Auxiliary*** will participate later in the Spring in a workshop on "Postponing Sexual Involvement," a program developed by the Department of Gynecology and Obstetrics at Emory University and Grady Memorial Hospital in Atlanta. Thirty-five volunteers will participate in the 2-day workshop. Each will be expected to reach 50 young people over the next 2 years. The series is designed to help young people resist

pressures to become sexually involved before they are ready for such involvement. "How To Say No" is designed to provide these young people with tools to help them bridge the gap between their physical development and their cognitive ability to handle the implications of such development.

Doctors' Day

Recognizing and remembering our doctors is an everyday pleasure, but March 30 is the official day set aside each year for special events and projects in their honor. Community service activities, social events, cards, flowers, and gifts are some of the ways auxilians say thanks for all the hours spent in providing the best health care found anywhere. The ***Auxiliary to the Medical Association of Atlanta*** gave a luncheon for all the retired physicians in their medical society. Transportation was provided by auxiliary members for physicians needing it. This auxiliary honored all their physicians with a "home-cooked" dinner party on March 26. This was a repeat performance from last year as requested by the doctors. Dr. Louella Klein, President of the American College of Obstetrics and Gynecology, an Atlantan, gave the address of the evening. The ***Auxiliary to the DeKalb County Medical Society*** presented each retired physician with a basket of fruit. A blood pressure screening project was held at the DeKalb General Hospital in honor of the doctors. This is the second year for this screening and could become an annual event. The ***Thomas Area Auxiliary*** observed Doctors' Day by presenting all the doctors in Thomasville with a red carnation and donating a copy of the book, *The Medical Profession in Georgia — 1733-1983,* to the Thomasville Library. The ***Tift County Auxiliary*** held a dinner with entertainment and will complete a special project to honor their physicians.

Brighter Rainbows

Remembering, enriching, educating are not just words to our county auxiliaries. They are challenges, goals, actions. Rainbows are symbols of hope and a better future. Auxiliaries brighten many rainbows.



Live and help live

Catastrophic disease knows no boundaries. It can strike old and young alike. But it is particularly tragic when a life that has just begun is affected.

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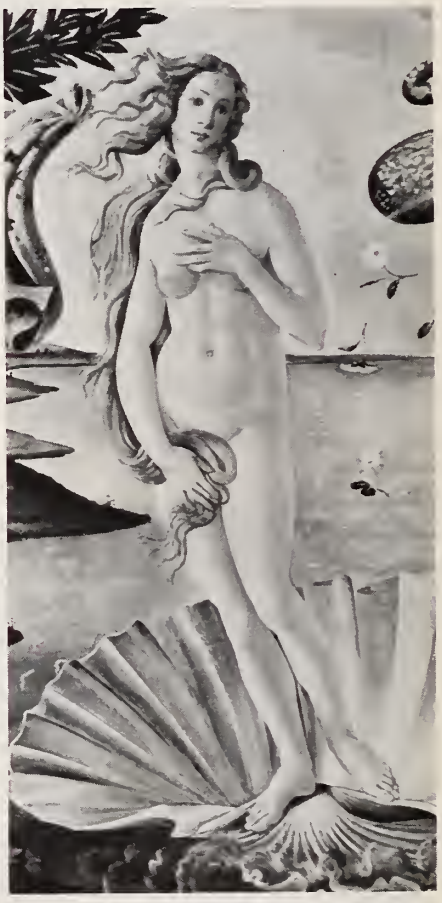
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Mammography can detect breast cancers even smaller than the hand can feel.



Low-dose breast x-ray, mammography, is giving hope that the leading cause of cancer deaths in women will be greatly diminished.

We urge women without symptoms of breast cancer, ages 35 to 39, to have one mammogram for the record, women 40 to 49 to have a mammogram every 1 to 2 years, and women 50 and over, one a year. Breast self-examination is also an important health habit and should be practiced monthly. Ask your local Cancer Society for free leaflets on both subjects.

The American Cancer Society wants you to know.

Read this page like your life depends on it

Learning how to examine your breasts properly can help save your life. Breast cancer found early and treated promptly, has an excellent chance for cure. Once a month, about a week after your period, when your breasts are not tender or swollen, use this simple 3-step self-examination procedure. Regular inspection shows what is normal for you and will give you confidence in your examination. Most lumps are not cancer, but only a doctor can make a diagnosis. Ask your doctor to teach you this method:



1. In bath or shower.

Fingers flat, move gently over each breast with the opposite hand. Check for any lumps, hard knots or thickening.



2. In front of a mirror.

Inspect your breasts with arms at your sides. Next, raise your arms high overhead. Look for any changes in contour, a swelling, dimpling of skin or changes in nipple. Rest palms on hips, press down firmly to flex chest muscles. Left and right breast will not exactly match.



Russell Kirk

3. Lying down.

To examine right breast, put pillow or folded towel under right shoulder. Place right hand behind head to distribute breast tissue more evenly on chest. With left hand fingers flat, press gently in small circular motions around an imaginary clock face. Begin at the outermost top of right breast (12:00, move on to 1:00, and so on, around and back to 12:00). A ridge of firm tissue in the lower curve of each breast is normal. Make about three circles moving closer and including nipple. Slowly repeat procedure on left breast. Notice how breast structure feels. Finally squeeze nipple gently between thumb and index finger. Any discharge, clear or bloody, should be reported to your doctor immediately. The American Cancer Society wants you to know.

AMERICAN CANCER SOCIETY®

Organs Needed

Call A Procurement Coordinator, Please!

by Richard C. Treat, M.D.

IT IS AS SIMPLE and straightforward as the title of this article to initiate the chain of events which will end the suffering and premature death of many patients. As a competent physician, you will have already accomplished the most difficult task in the spectrum of organ and tissue procurement. You have not only provided optimum medical care for your patient but also know the details of his or her medical history well and are aware that your patient is a potential candidate for organ or tissue donation. Your willingness to initiate contact of an organ and tissue Procurement Coordinator is necessary for such a gift of life to become a reality.

The magnitude, impact, and significance of the need are usually underestimated by physicians. In Georgia alone, there are an estimated 200 individuals awaiting renal transplantation. Numerous potential recipients of other organs (i.e., hearts, livers, etc.) are waiting for transplant surgery. Many will die before an organ becomes available. Statewide, over 60,000 people are injured each year in fires. Of those, 250 will die due to burn injuries. Georgia has the fifth highest incidence of thermal injuries in this country. The need for cadaver skin exceeds the supply by a multiple of ten. Six hundred individuals are also awaiting corneal transplants.

Dr. Treat is Chief of the Burn/Trauma Service, Department of Surgery, School of Medicine, Medical College of Georgia, Augusta, GA 30912. Send reprint requests to him.

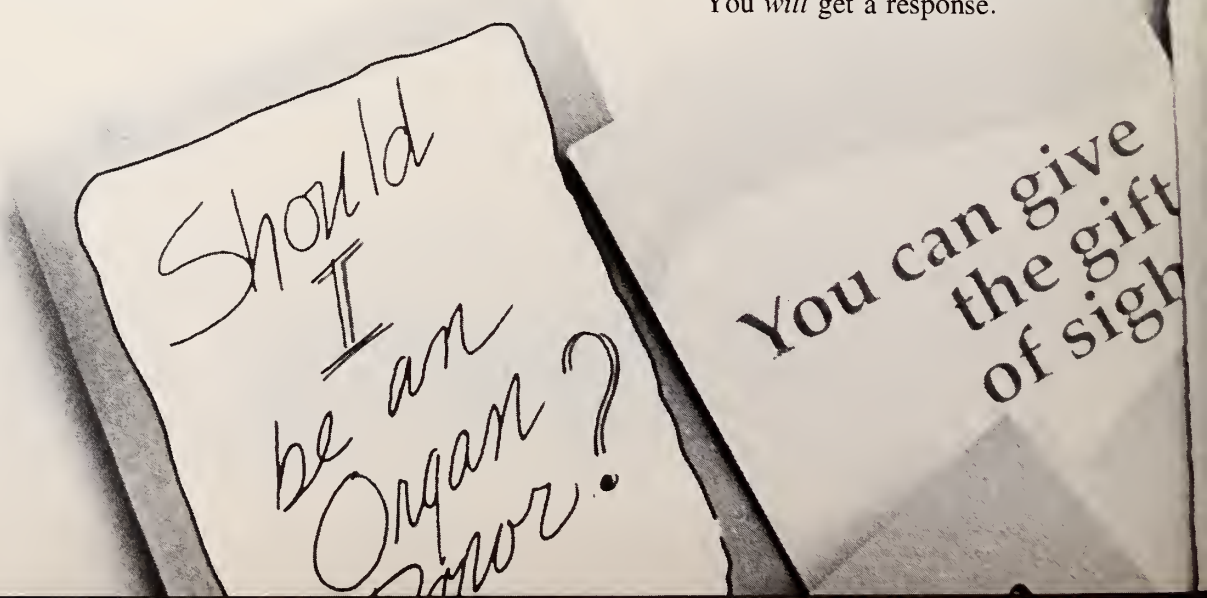
Any Procurement Coordinator will accept a call concerning any potential donor of any type of organ or tissue.

Although not a great deal of effort is required, many physicians hesitate to initiate organ and tissue donation because of the perception of a family's feelings with respect to death and organ and tissue donation. It is not commonly within the province of a physician's responsibility to make decisions concerning organ and tissue donation on behalf of the deceased or the next-of-kin of the potential donor. Physicians are realizing with increased frequency, however, that they have an obligation to assure that this opportunity is offered to the appropriate family members whenever medical conditions make donation possible. After all, only the family can morally, ethically, and legally make such decisions. For the physician to withhold this decision-making opportunity from a family is to deny them the privilege of bringing life out of death and further denies potential recipients a chance to greatly improve the quality of their life.

The Auxiliary to the MAG has done much work in the area of organ donation. Mrs. Katherine Clark of Albany, is the State Organ Donor Chairman for the Auxiliary.

The Role of the Procurement Coordinator

Within the immediate reach of every physician reading this article, there is at least one organ and tissue Procurement Coordinator. They want you to call them. Many "hot lines" exist which are monitored constantly. You *will* get a response.



These well trained individuals want to assist and/or interact with families at this time and to coordinate the donation process. In obtaining the donation consent, the Coordinators are trained to meet the needs of other immediate family members in this time of grief.

Although organs such as kidneys, heart, and liver are virtually always donated from donors who are brain dead but are still sustained by artificial means, other organs including eyes, skin, and bone may commonly be donated from the majority of deceased patients. The Procurement Coordinator is specifically trained to aide in identifying the organs and tissues which may be donated.

There is close cooperation among members of this group. Any Procurement Coordinator will accept a call concerning any potential donor of any type of organ or tissue. Even when the calling institution is outside of a Coordinator's area of service, they will contact the appropriate organization for you. The Coordinator will require certain standard information concerning each potential donor. If after evaluation, specialized groups are needed (i.e., heart, liver), the Procurement Coordinator will see that all needs related to this effort are met.

Georgia Procurement Agencies

Medical College of Georgia Organ Procurement Program	
Augusta	**(404) 828-3893**
Savannah	**(912) 234-2213**
Medical College of Georgia Eye Bank	
Augusta	**(404) 724-1388**
Burn Foundation Skin Bank	
Augusta	**(404) 860-7817**
Atlanta Regional Organ Procurement Agency	
Atlanta	**(404) 872-1782**
Atlanta Regional Tissue Bank	
Atlanta	**(404) 872-1782**
Georgia Lions Eye Bank, Inc.	
Atlanta	**(404) 321-9300**
Alabama Regional Organ Bank	
Albany	**(912) 888-7820**
University of Florida Organ Procurement Program	
Gainesville	**(904) 392-3711**

---cut out and save---

"Reach Out And Touch Someone"

It is indeed remarkable what can be achieved with only a single phone call: a kidney patient may achieve a normal life without dialysis, a burn victim may survive because of the availability of critically needed cadaver skin, or sight may be restored for the blind. Perhaps even an infant will be given a full and normal life to live. Using just one phrase, the physician can bring life out of death — "Call a Procurement Coordinator." Without this small effort, potential recipients may not receive the cherished gift of life afforded only through the organ and tissue procurement program.

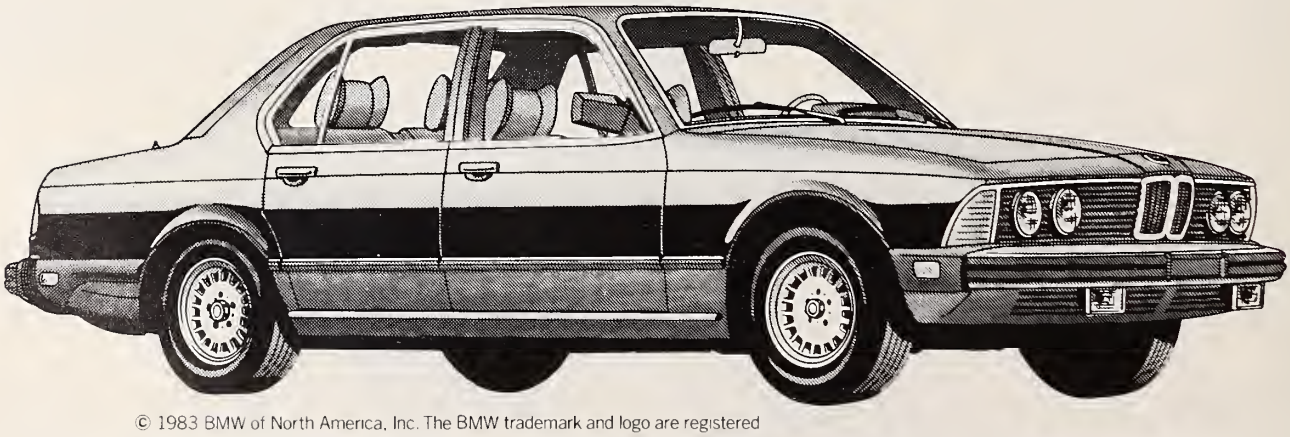


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Everything You've Always Wanted to Know About Child Abuse and Were Required to Report

ROBERT N. BERG, *Atlanta**

You are treating a child under the age of 18 for multiple bruises about the child's shoulders and back. You suspect that the child's injuries were not accidental and may have been caused by the child's parents or caretaker. After treating the child, you question him in order to determine whether or not he may be a victim of child abuse, and the child insists that the injuries were caused by a fall. Upon further questioning, however, the child admits that the injuries were caused by his parents, who, according to the child, routinely beat him for no apparent reason.

In order to protect his parents and, you think, to avoid the risk of further or more drastic maltreatment, the child pleads with you to forget about the matter. You are sympathetic to the child's dilemma, but you wonder whether or not you may have some legal or ethical obligation to do more than simply treat the child and send him home. Accordingly, you call your legal counsel, who advises you immediately to contact the appropriate child welfare agency and advise it of the situation.

Any person participating in the making of a report (of child abuse) . . . under the Statute is immune from any liability, either civil or criminal, as long as the person acted in good faith.

More importantly, he tells you that your failure to do so may result in some significant adverse consequences: You may be guilty of a misdemeanor and punished accordingly; you may have your license to practice medicine suspended or revoked; or, you may be sued for malpractice.

Obviously, your legal counsel has caught your attention, and you question him further on these risks. In response to your questions, he tells you as follows:

The Duty to Report Incidents of Child Abuse and Child Neglect

Under Section 19-7-5 of the Georgia Code (the "Statute"), physicians, as well as other limited licensed practitioners (such as dentists and podiatrists), and

* Prepared at the request of the Medical Association of Georgia. Mr. Berg is a partner in the firm of Powell, Goldstein, Frazer & Murphy, General Counsel to the Association, 1100 C & S National Bank Building, Atlanta, GA 30335.

non-physician personnel (such as social workers, teachers, child care personnel and law enforcement personnel), having "reasonable cause" to believe that a child under the age of 18 has had physical injuries inflicted upon him by a parent or caretaker by other than accidental means, has been neglected or exploited by a parent or caretaker, or has been sexually assaulted or sexually exploited, are *required* to report such occurrence to the appropriate child welfare agency providing protective services (or, in the absence of such an agency, to an appropriate police authority or a district attorney). In certain institutional cases, however, such as where the physician learns of the suspected child abuse as a result of serving on the staff of a hospital, the physician is required to notify the person in charge of the hospital or that person's designated delegate, and the duty to report rests with that person.[1]

Moreover . . . a physician is under an ethical obligation to report suspected incidents of child abuse to the appropriate agency so as to minimize the risk "that the victims could receive more severe abuse. . . ."

Under the Statute, an oral report must be made as soon as possible, by telephone or otherwise, and must be followed by a written report, if requested. The report must contain the names and addresses of the child and his parents or caretaker, if known, the child's age, the nature and extent of the child's injuries, including any evidence of previous injuries, and any other information that the physician believes might be helpful in establishing the cause of the injuries and the identity of the perpetrator.[2] In addition, the physician may take photographs of the child, without first obtaining the permission of the child's parent or guardian, in order to support his suspicion of child abuse; any photographs taken, however, must be taken in a manner so as not to reveal the identity of the child.[3]

Any person participating in the making of a report or causing a report to be made under the Statute is immune from any liability, either civil or criminal, as long as the person acted in good faith.[4] This immunity also extends to persons participating in judicial or other proceedings resulting from the making of a report. Alternatively, any person required by the Statute to report a suspected case of child abuse who knowingly and willfully fails to do so may be found guilty of a misdemeanor and punished accordingly (up to $1,000 in fines or up to one year's imprisonment, or both).[5]

The Failure to Report Child Abuse as Grounds for a Malpractice Action

The threat of civil penalties and imprisonment are enough for you to decide that you must promptly file an oral report with the appropriate agency. However, your legal counsel goes on to tell you about a case in California[6] in which a physician was sued by his minor patient, both for malpractice in failing to diagnose the child as suffering from "battered child syndrome" *and* for failing to comply with the applicable reporting statute. The California Court of Appeals, reversing the trial court, held that the child's complaint had stated a cause of action and therefore was not subject to the defendant physician's motion to dismiss. In particular, the Court found that the patient should be allowed to introduce evidence tending to show that the physician actually observed the patient's injuries and formed the opinion that

they were intentionally inflicted on her by her parents, but failed to report this knowledge to the appropriate authority. If the patient could convince the trier-of-fact of this, according to the Court, the patient could be successful in her lawsuit and therefore be entitled to damages for the severe injuries inflicted upon her by her parents subsequent to the patient's being returned to the custody of her parents.[7]

The Failure to Report Child Abuse as Grounds for License Revocation or Suspension

Being a thorough and conscientious practitioner, your legal counsel also reminds you of your ethical obligations, and the potential risks involved in failing to comply with those obligations.

By statute, one of the grounds pursuant to which the Composite State Board of Medical Examiners can take disciplinary action against a physician is if the physician has "engaged in any unprofessional, unethical, deceptive, or deleterious conduct or practice harmful to the public, which conduct or practice need not have resulted in actual injury to any person." In addition, the applicable statutory provision provides that the term "unprofessional conduct" shall include "any departure from, or failure to conform to, the minimal standards of acceptable and prevailing medical practice."[8]

Under the American Medical Association's "Principles of Medical Ethics," a physician "shall respect the law." This principle, in turn, has been interpreted by the AMA's Judicial Council as imposing an obligation on physicians to comply with statutory requirements (and, indeed, in certain cases, to comply with ethical standards that may exceed the statutory requirements).[9] Moreover, the Judicial Council strongly implies that, even in the absence of any mandatory reporting requirements imposed by statute, a physician is under an ethical obligation to report suspected incidents of child abuse to the appropriate agency, so as to minimize the risk "that the victims could receive more severe abuse that may result in permanent bodily or brain injury or even death."[10]

Conclusion

You thank your legal counsel for his advice, and then you return to your patient. You explain to him that you have a legal and ethical obligation to report this matter to the appropriate agency. You also explain that your doing so is in the patient's best interest, in that it may prevent the occurrence of additional and possibly more severe abuse by the patient's parents.

The patient smiles and thanks you for your help in dealing with a difficult situation. Or, the patient angrily stalks off, threatening never to seek treatment from you again. In either case, you should be comfortable that you have complied with your legal and ethical obligations. Moreover, by doing so, you have, in the words of the Georgia statute: "cause(d) the protective services of the State to be brought to bear on the situation in an effort to prevent further abuses, to protect and enhance the welfare of . . . children, and to preserve family life where possible."[11]

Notes

1. O.C.G.A. §19-7-5(b).
2. O.C.G.A. §19-7-5(c).
3. *Id.*
4. O.C.G.A. §19-7-5(d). If the physician has reasonable grounds to believe that his or her minor patient may be abused or deprived, the physician may contact the Georgia Department of Human Resources or the appropriate county or local agency, which are authorized, in such cases, to permit access to their records. O.C.G.A. §49-5-41(b)(1). By doing so, the physician may be able to confirm the reasonableness of his or her suspicion, as well as further evidence the physician's good faith.
5. O.C.G.A. §19-7-5(e).
6. *Landeros v. Flood*, 17 Cal. 3d 399, 551 P.2d 389 (1976).
7. *Id.*
8. O.C.G.A. §43-34-37(a)(7).
9. Current Opinions of the Judicial Council of The American Medical Association, Sections 1.02 and 2.02.
10. *Id.*
11. O.C.G.A. §19-7-5(a).

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PERSONALS

Fifth District

Harold A. Gussack, M.D., was appointed medical director of the Greater Atlanta Physicians Association.

Charles Hatcher, Jr., M.D., Vice President for Health Affairs and Director of the Robert W. Woodruff Health Sciences Center of Emory University, was named Vice President and President-Elect of the Society of Thoracic Surgeons. He will assume office in January 1986.

Sixth District

The Griffin-Spalding Hospital Authority honored four retired physicians at a recent reception. They are **George Brown, M.D., John E. Clouse, M.D., Virgil Williams, M.D.,** and **Jack Austin, M.D.**

Seventh District

Richard C. Smith, M.D., of LaFayette, was named chief of staff at Tri-County Hospital for the coming year, and **Wilem K. Rivenburg, M.D.,** was named vice chief of staff.

Ninth District

A. Frederick Bloodworth, M.D., is retiring from the private practice of internal medicine and pulmonary disease. He received his M.D. Degree from the Medical College of Georgia in 1950. He is past President of the American Lung Association of Georgia, The Georgia Thoracic Society, and the Georgia Chapter of the American College of Chest Physicians. He served 6 years on the National Council of the American Thoracic Society.

Tenth District

Monroe family practitioner, **Lynn M. Huie, M.D.,** retired on February 28. He received his M.D. degree from the Medical College of Georgia. Dr. Huie had practiced medicine in Monroe since 1939.

DEATHS

Robert C. Garrett

Robert C. Garrett, M.D., 45, died January 26 of a heart attack. Dr. Garrett had been associated with the Dooly Medical Center for the past 16 years. He received his M.D. degree at Bowman Gray School of Medicine at Wake Forest College. He interned at Grady Memorial Hospital in Atlanta and served 2 years in the U.S. Army prior to coming to Vienna.

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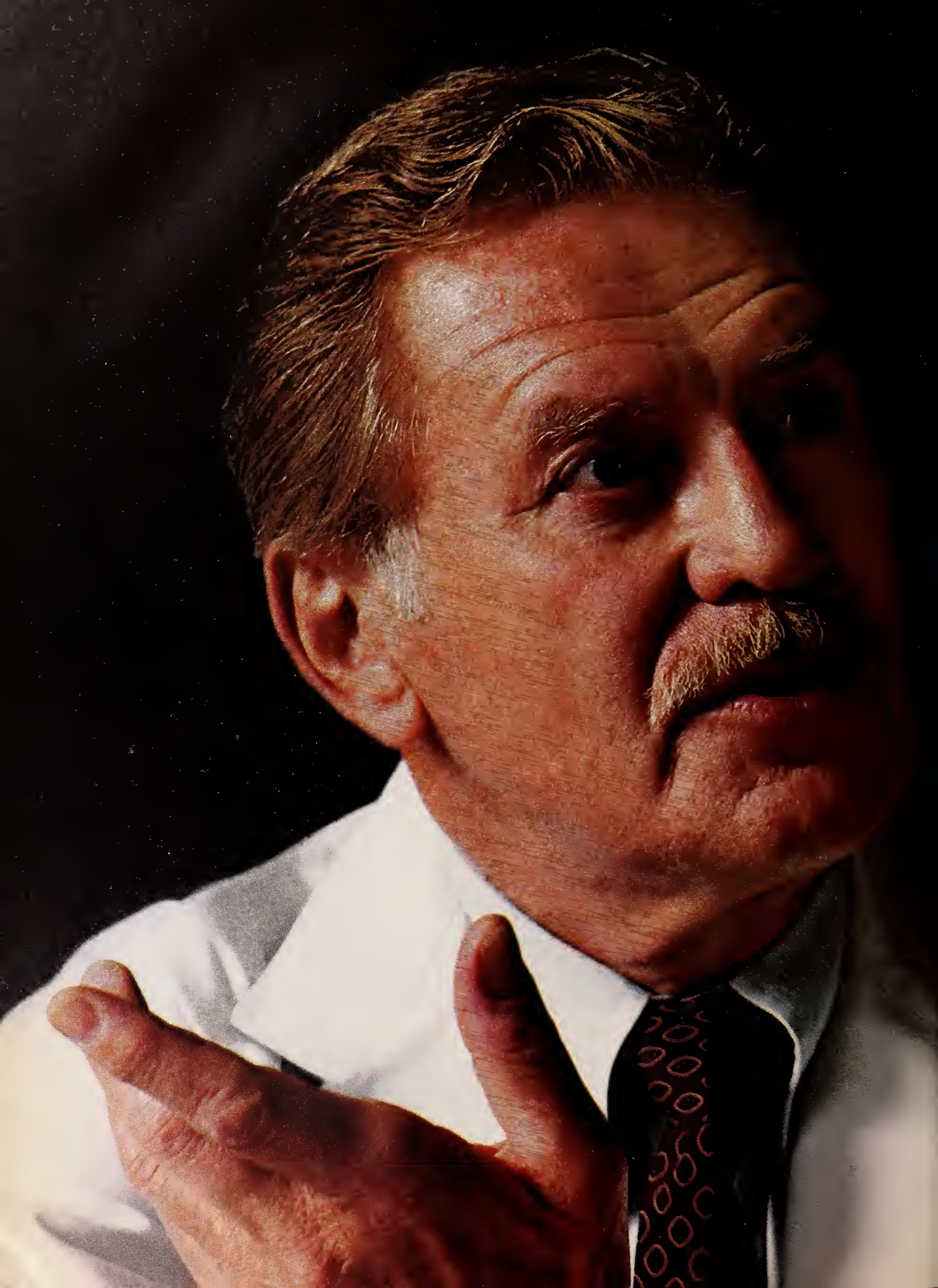
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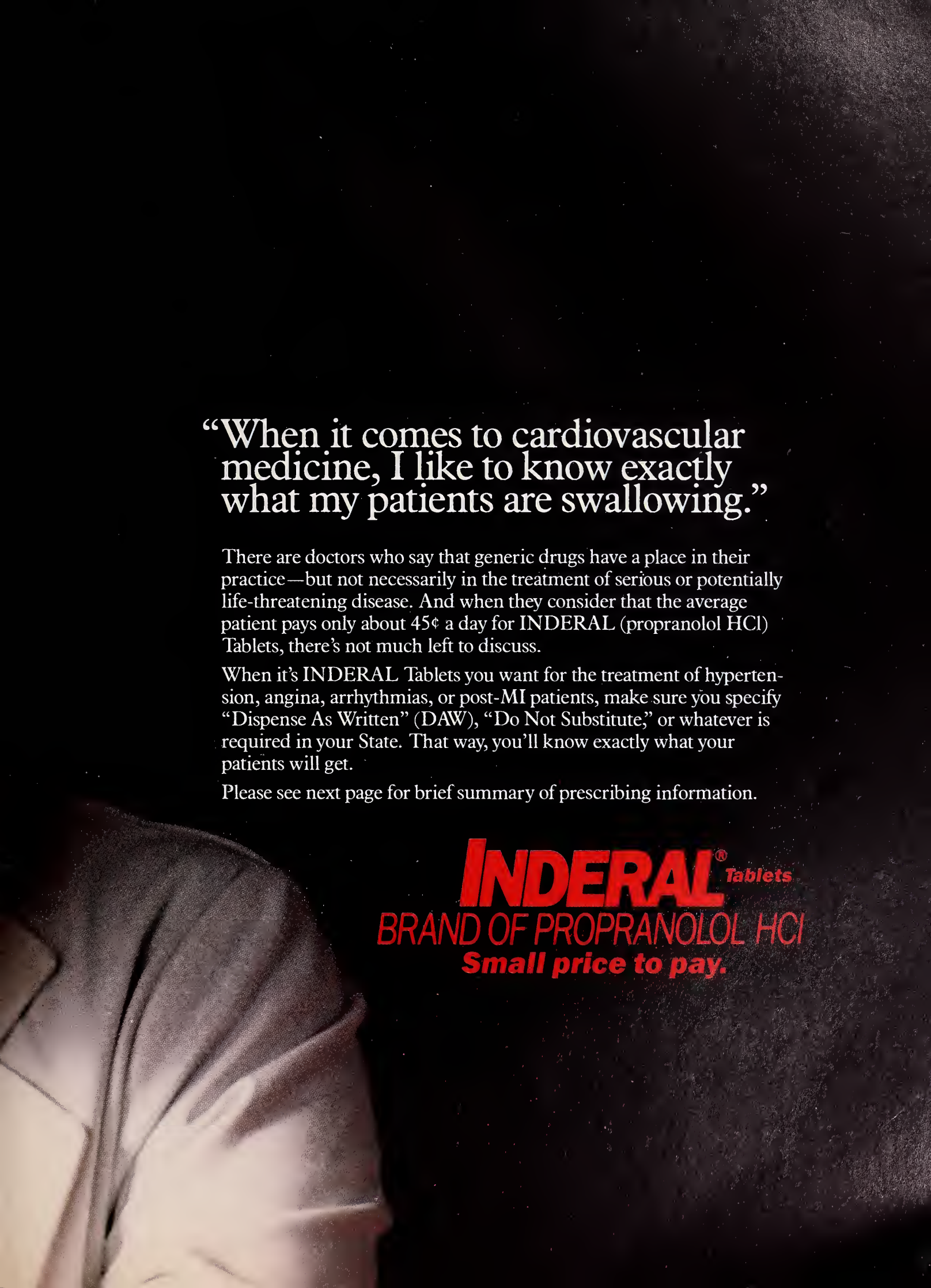
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WARNINGS

CARDIAC FAILURE: Sympathetic stimulation may be a vital component supporting circulatory function in patients with congestive heart failure, and its inhibition by beta blockade may precipitate more severe failure. Although beta blockers should be avoided in overt congestive heart failure, if necessary they can be used with close follow-up in patients with a history of failure who are well compensated and are receiving digitalis and diuretics. Beta-adrenergic blocking agents do not abolish the inotropic action of digitalis on heart muscle.

IN PATIENTS WITHOUT A HISTORY OF HEART FAILURE, continued use of beta blockers can, in some cases, lead to cardiac failure. Therefore, at the first sign or symptom of heart failure, the patient should be digitalized and/or treated with diuretics, and the response observed closely, or INDERAL should be discontinued (gradually, if possible).

IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following abrupt discontinuance of INDERAL therapy. Therefore, when discontinuance of INDERAL is planned the dosage should be gradually reduced over at least a few weeks and the patient should be cautioned against interruption or cessation of therapy without the physician's advice. If INDERAL therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute INDERAL therapy and take other measures appropriate for the management of unstable angina pectoris. Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease who are given propranolol for other indications.

Nonallergic Bronchospasm (e.g., chronic bronchitis, emphysema)—PATIENTS WITH BRONCHOSPASTIC DISEASES SHOULD IN GENERAL NOT RECEIVE BETA BLOCKERS. INDERAL should be administered with caution since it may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta receptors.

MAJOR SURGERY: The necessity or desirability of withdrawal of beta-blocking therapy prior to major surgery is controversial. It should be noted, however, that the impaired ability of the heart to respond to reflex adrenergic stimuli may augment the risks of general anesthesia and surgical procedures.

INDERAL, like other beta blockers, is a competitive inhibitor of beta-receptor agonists and its effects can be reversed by administration of such agents, e.g., dobutamine or isoproterenol. However, such patients may be subject to protracted severe hypotension. Difficulty in starting and maintaining the heartbeat has also been reported with beta blockers.

DIABETES AND HYPOGLYCEMIA: Beta-adrenergic blockade may prevent the appearance of certain premonitory signs and symptoms (pulse rate and pressure changes) of acute hypoglycemia in labile insulin-dependent diabetes. In these patients, it may be more difficult to adjust the dosage of insulin.

THYROTOXICOSIS: Beta blockade may mask certain clinical signs of hyperthyroidism. Therefore, abrupt withdrawal of propranolol may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm. Propranolol does not distort thyroid function tests.

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker. In one case this resulted after an initial dose of 5 mg propranolol.

PRECAUTIONS

General: Propranolol should be used with caution in patients with impaired hepatic or renal function. INDERAL is not indicated for the treatment of hypertensive emergencies.

Beta-adrenoreceptor blockade can cause reduction of intraocular pressure. Patients should be told that INDERAL (propranolol hydrochloride) may interfere with the glaucoma screening test. Withdrawal may lead to a return of increased intraocular pressure.

Clinical Laboratory Tests: Elevated blood urea levels in patients with severe heart disease. elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase.

DRUG INTERACTIONS: Patients receiving catecholamine-depleting drugs such as reserpine should be closely observed if INDERAL is administered. The added catecholamine-blocking action may produce an excessive reduction of resting sympathetic nervous activity which may result in hypotension, marked bradycardia, vertigo, syncopal attacks, or orthostatic hypotension.

Carcinogenesis, Mutagenesis, Impairment of Fertility: Long-term studies in animals have been conducted to evaluate toxic effects and carcinogenic potential. In 18-month studies in both rats and mice, employing doses up to 150 mg/kg/day, there was no evidence of significant drug-induced toxicity. There were no drug-related tumorigenic effects at any of the dosage levels. Reproductive studies in animals did not show any impairment of fertility that was attributable to the drug.

Pregnancy: Pregnancy Category C. INDERAL has been shown to be embryotoxic in animal studies at doses about 10 times greater than the maximum recommended human dose.

There are no adequate and well-controlled studies in pregnant women. INDERAL should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers: INDERAL is excreted in human milk. Caution should be exercised when INDERAL is administered to a nursing woman.

Pediatric Use: Safety and effectiveness in children have not been established

ADVERSE REACTIONS

Most adverse effects have been mild and transient and have rarely required the withdrawal of therapy.

Cardiovascular: bradycardia; congestive heart failure; intensification of AV block; hypotension; paresthesia of hands; thrombocytopenic purpura, arterial insufficiency, usually of the Raynaud type.

Central Nervous System: Lightheadedness; mental depression manifested by insomnia, lassitude, weakness, fatigue; reversible mental depression progressing to catatonia; visual disturbances; hallucinations; an acute reversible syndrome characterized by disorientation for time and place, short-term memory loss, emotional lability, slightly clouded sensorium, and decreased performance on neuropsychometrics.

Gastrointestinal: nausea, vomiting, epigastric distress, abdominal cramping, diarrhea, constipation, mesenteric arterial thrombosis, ischemic colitis.

Allergic: pharyngitis and agranulocytosis, erythematous rash, fever combined with aching and sore throat, laryngospasm and respiratory distress.

Respiratory: bronchospasm.

Hematologic: agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpura.

Auto-Immune: In extremely rare instances, systemic lupus erythematosus has been reported.

Miscellaneous: alopecia, LE-like reactions, psoriasiform rashes, dry eyes, male impotence, and Peyronie's disease have been reported rarely. Oculomucocutaneous reactions involving the skin, serous membranes and conjunctivae reported for a beta blocker (practolol) have not been associated with propranolol.

*The appearance of INDERAL tablets is a registered trademark of Ayerst Laboratories.

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MEDICAL MEETING CALENDAR

APRIL

17-20—*Columbus:* **Georgia Association of Pathologists Annual Meeting.** Contact A. Bleakley Chandler, MD, President, GAP, MCG, Augusta 30912. PH:404/828-2923.

19—*Atlanta:* **Headache and Facial Pain.** Sponsored by the Dept. of Neurology. Category 1 credit. Contact Office of CME, Emory Univ. Sch. of Med., 1440 Clifton Rd., NE, Atlanta 30322. PH:404/329-5695.

19-21—*Atlanta:* **Christian Medical Foundation Second Annual Southeast Regional Spring Meeting.** Category 1 credit. Contact Walker C. McGraw, M.D., 6185 S. Buford Hwy., Ste. C-112, Norcross 30071. PH:404/449-5161.

20-24—*Sea Island:* **Masters in GYN/OB.** Category 1 credit. Contact Office of CME, Emory Univ. Sch. of Med., 1440 Clifton Rd., NE, Ste. 110, Atlanta 30322. PH:404/329-5695.

21-25—*Atlanta:* **American Assn. of Neurological Surgeons Annual Meeting.** Contact AANS, 22 S. Washington St., Park Ridge, IL 60068. PH:312/692-9500.

25-27—*Atlanta:* **Practical Applications of Computers in Health Care: The Integration of Clinical and Administration Information.** Category 1 credit. Contact Office of CME, Emory Univ. Sch. of Med., 1440 Clifton Rd., NE, Ste. 110, Atlanta 30322. PH:404/329-5695.

25-28—*Savannah:* **MAG House of Delegates.** Contact MAG, 938 Peachtree Street, NE, Atlanta 30309. PH:404/876-7535 or 1-800-282-0224 (toll free in Ga.).

29-May 4—*Augusta:* **20th Annual Family Practice Symposium.** AMA Category 1 and AAFP prescribed credit. Contact Div. of Cont. Ed., MCG, Augusta 30912. PH:404/828-3967.

MAY

2-5—*Sea Island:* **Georgia Society of Ophthalmology.** Category 1 credit. Contact Talitha Russell, Med. Assn. of Ga., 938 Peachtree St., NE, Atlanta 30309. PH:404/876-7535 or 1-800-282-0224 (toll free in Ga.).

3-4—*Atlanta:* **Second Annual Conference on Primary Care for the Underserved.** Category 1 credit. Contact Dir. of Med. Ed., Morehouse School of Medicine, 740 Westview Dr., SW, Atlanta 30314.

6-10—*Atlanta:* **Family Medicine Board Review.** Category I credit. Contact Office of CME, Emory Univ. Sch. of Med., 1440 Clifton Rd., NE, Suite 110, Atlanta 30322. PH:404/329-5695.

9-12—*Savannah:* **American Academy of Anesthesia Associates Ninth Annual Meeting, "Neurosurgical Anesthesia and Neurological Monitoring."** Category 1 credit. Contact AAAA, P.O. Box 77253, Atlanta 30357. PH:404/875-1735.

9-12—*Amelia Island, FL:* **Georgia Radiological Society Annual Meeting.** Category 1 credit. Contact Lloyd B. Schnuck, Jr., M.D., 9 Medical Arts Ctr., Savannah 31405. PH:912/355-3642.

12-16—*Atlanta:* **American Urological Assn.** Annual Meeting. Contact AUA, 1120 N. Charles St., Baltimore, MD 21201. PH:301/727-1100.

23-24—*Atlanta:* **Update in Pathology and Laboratory Medicine.** Category I credit. Contact Office of CME, Emory Univ. Sch. of Med., 1440 Clifton Rd., NE, Ste. 110, Atlanta 30322. PH:404/329-5695.

23-24—*Callaway Gardens:* **13th Annual Perinatal Medicine Conference, "Perinatology in Practice: 1985."** Category 1 credit. Contact Div. of Perinatology, The Medical Center, P.O. Box 951, Columbus 31994. PH:404/571-1000.

25—*Atlanta:* **A Comprehensive Course on the ND:YAG Laser.** Category 1 credit. Contact Ginger Lineberger, Hallum-Arnold Eye Found., Inc., 3280 Howell Mill Rd., NW, Ste. 104, Atlanta 30327. PH:404/351-2713.

31-June 2 — *Sea Island:* **Georgia Neurosurgical Society.** Contact Joseph Barnett, M.D., Pres., GNS, 776 Canton Rd., Marietta 30066.

JUNE

10-13—*Kiawah Island, SC:* **16th Annual Internal Medicine Symposium.** AMA Category 1 and AAFP prescribed credit. Contact Div. of Cont. Ed., MCG, Augusta 30912. PH:404/828-3967.

13-14—*Atlanta:* **A Basic Course in Phacoemulsification and Extracapsular Cataract Extraction with Posterior Chamber Lens Implantation.** Category 1 credit. Contact Ginger Lineberger, Hallum-Arnold Found., Inc., 3280 Howell Mill Rd., NW, Ste. 104, Atlanta 30327. PH:404/351-2713.

14-16—*Hilton Head Island, SC:* **Georgia Society of Dermatologists Annual Meeting.** Category 1 credit. Contact Gerald Chotiner, MD, 3250 Howell Mill Rd., Atlanta 30327. PH:404/352-1730.

20-22—*Atlanta:* **Contact Lens Seminar.** Category 1 credit. Contact Office of CME, Emory Univ. Sch. of Med., 1440 Clifton Rd., NE, Ste. 110, Atlanta 30322. PH:404/329-5695.

20-23—*Sea Island:* **Georgia Chapter, Amer. Acad. of Pediatrics Spring Meeting.** Category 1 credit. Contact William C. Mankin, Exec. Secy., Ga. Chapter, AAP, 4059 Land O'Lakes Dr., NE, Atlanta 30342. PH:404/237-3922.

24-29—*Hilton Head Island, SC:* **New Advances in Nuclear Medicine, NMR, and Angioplasty for the Practicing Physician.** Category 1 credit. Contact Office of CME, Emory Univ. Sch. of Med., 1440 Clifton Rd., NE, Ste. 110, Atlanta 30322. PH:404/329-5695.

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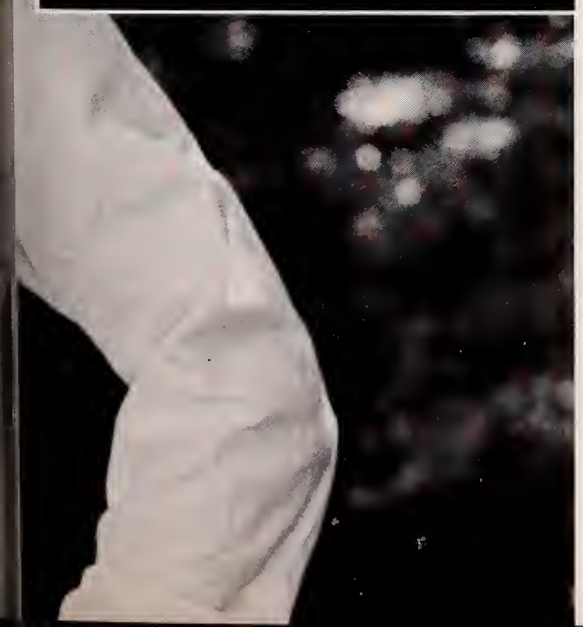


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For further information contact:

Medical Director: John Hardman, M.D.
Hospital Administrator: Jim Eyler

Charter Lake Hospital

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Macon, Georgia 31209
(912) 474-6200

Beds: 80
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Programs: Adult and Adolescent Psychiatric; Adult and Adolescent Addictive Disease.

For further information contact:

Medical Director:
Jack A. Morgenstern, M.D.
Hospital Administrator: Tom McDaniel

Charter Broad Oaks Hospital

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Savannah, Georgia 31406
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Beds: 88
Psychiatric Staff: 18
Programs: Adult and Adolescent Psychiatric

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Medical Director: Henry A. Brandt, M.D.
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(912) 638-1999

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Programs: Adult Psychiatric; Adult Addictive Disease
Other Programs: Recovering Nurses; Impaired Athletes; Intervention Services

For further information contact:

Medical Director: Roy F. Thagard, M.D.
Hospital Administrator: James R. Thomas

Charter Brook Hospital

3913 North Peachtree Road
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(404) 457-8315

Beds: 65
Medical Staff: 9
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Other Programs: Comprehensive Outpatient Services

For further information contact:

Medical Director: Lonny Scarborough, M.D.
Hospital Administrator: Jonathan Farr

Charter Winds Hospital

240 Mitchell Bridge Road
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Beds: 65
Programs: Geriatric, Adult and Adolescent Psychiatric

Scheduled to open June 1985

For further information contact:

Medical Director:
John Curtis, M.D.
Hospital Administrator:
Al Felgar

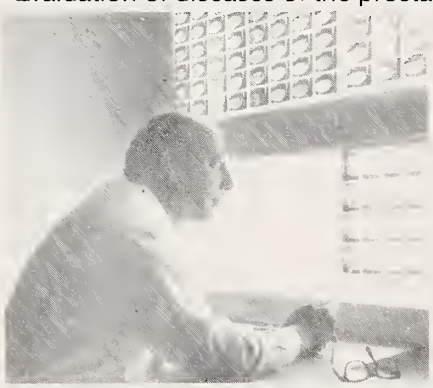
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To Join, Contact your county or state medical society or write: Division of Membership, AMA, 535 North Dearborn Street, Chicago, Illinois 60610 or call collect, (312) 751-6196.

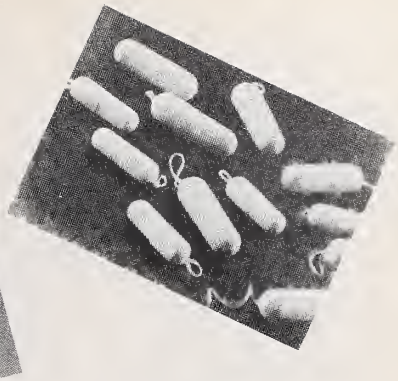
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1. Whiteside, M.E.: Enteric Coccidiosis among patients with the Acquired Immunodeficiency Syndrome. Am. J. Trop Med. Hyg. 33(6) 1984
2. Gourley G. et al: A Rapid Method for Collection and Analysis of Bile Pigments in Humans Gastroenterol, 84(5) 2, 1984
3. Rabbani G.H. et al: Comparison of String-test and Stool Examination in the Diagnosis of Strongyloidiasis and Giardiasis in Gastroenteritis Patients. As. Med. J. 25:695, 1982

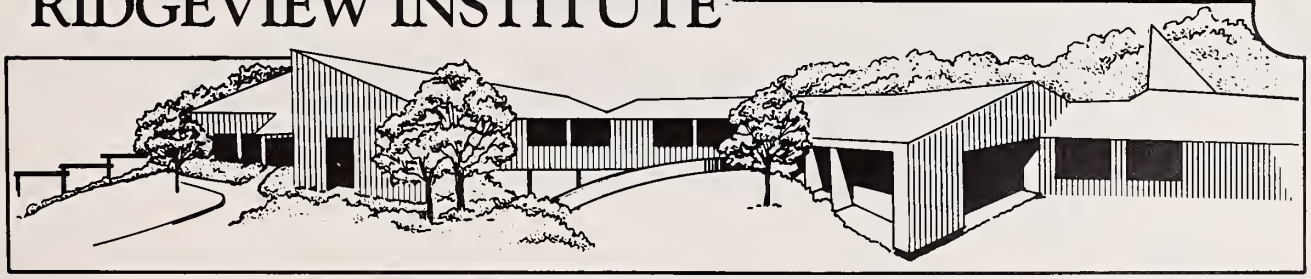
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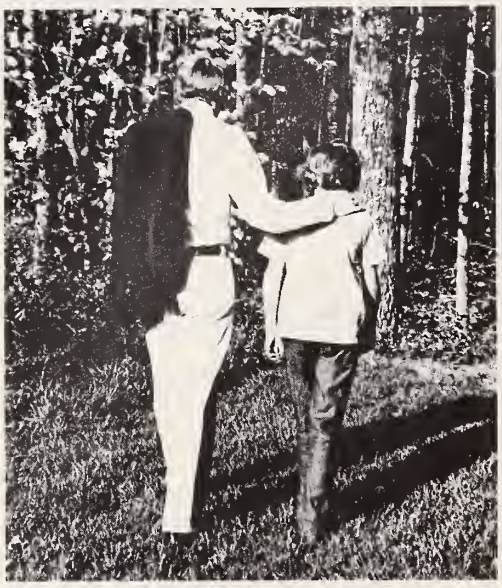
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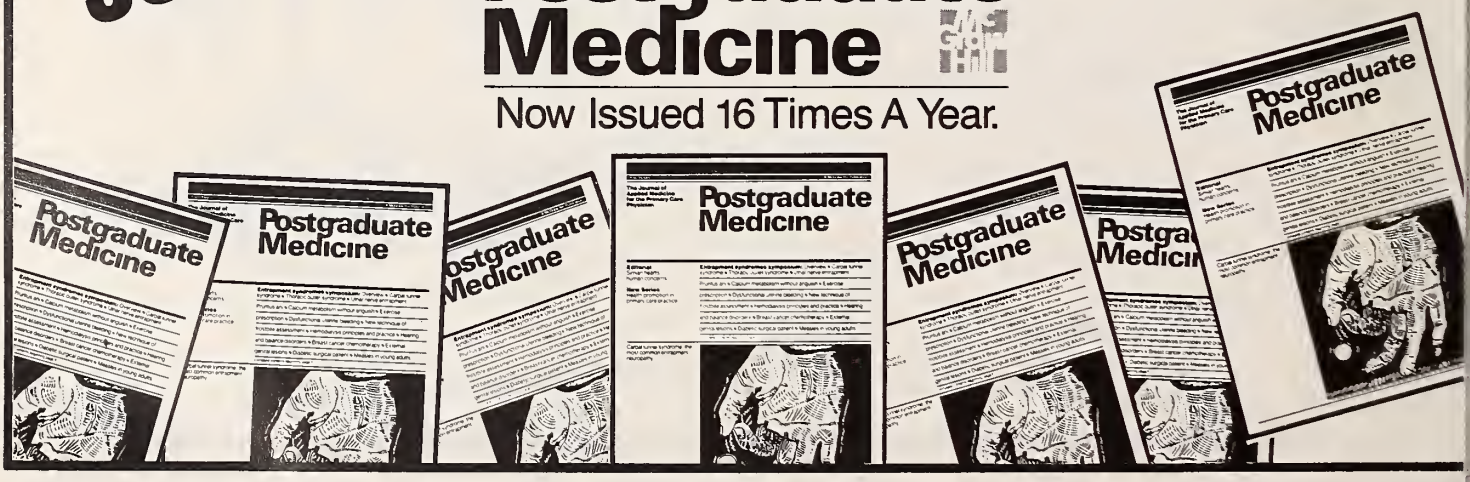
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* **WARNING**

This drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual. If this combination represents the dosage so determined, its use may be more convenient in patient management. Treatment of hypertension and edema is not static, but must be reevaluated as conditions in each patient warrant.

Contraindications: Concomitant use with other potassium-sparing agents such as spironolactone or amiloride. Further use in anuria, progressive renal or hepatic dysfunction, hyperkalemia. Pre-existing elevated serum potassium. Hypersensitivity to either component or other sulfonamide-derived drugs.

Warnings: **Do not use potassium supplements, dietary or otherwise, unless hypokalemia develops or dietary intake of potassium is markedly impaired.** If supplementary potassium is needed, potassium tablets should not be used. Hyperkalemia can occur, and has been associated with cardiac irregularities. It is more likely in the severely ill, with urine volume less than one liter/day, the elderly and diabetics with suspected or confirmed renal insufficiency. Periodically, serum K^+ levels should be determined. If hyperkalemia develops, substitute a thiazide alone, restrict K^+ intake. **Associated widened QRS complex or arrhythmia requires prompt additional therapy.** Thiazides cross the placental barrier and appear in cord blood. Use in pregnancy requires weighing anticipated benefits against possible hazards, including fetal or neonatal jaundice, thrombocytopenia, other adverse reactions seen in adults. Thiazides appear and triamterene may appear in breast milk. If their use is essential, the patient should stop nursing. Adequate information on use in children is not available. Sensitivity reactions may occur in patients with or without a history of allergy or bronchial asthma. Possible exacerbation or activation of systemic lupus erythematosus has been reported with thiazide diuretics.

Precautions: The bioavailability of the hydrochlorothiazide component of 'Dyazide' is about 50% of the bioavailability of the single entity. Theoretically, a patient transferred from the single entities of Dyrenium (triamterene, SK&F CO.) and hydrochlorothiazide may show an increase in blood pressure or fluid retention. Similarly, it is also possible that the lesser hydrochlorothiazide bioavailability could lead to increased serum potassium levels. However, extensive clinical experience with 'Dyazide' suggests that these conditions have not been commonly observed in clinical practice. Do periodic serum electrolyte determinations (particularly important in patients vomiting excessively or receiving parenteral fluids, and during concurrent use with amphotericin B or corticosteroids or corticotropin [ACTH]). Periodic BUN and serum creatinine determinations should be made, especially in the elderly, diabetics or those with suspected or confirmed renal insufficiency. Cumulative effects of the drug may develop in patients with impaired renal function. Thiazides should be used with caution in patients with impaired hepatic function. They can precipitate coma in patients with severe liver disease. Observe regularly for possible blood dyscrasias, liver damage, other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving triamterene, and leukopenia, thrombocytopenia, agranulocytosis, and aplastic and hemolytic anemia have been reported with thiazides. Thiazides may cause manifestation of latent diabetes mellitus. The effects of oral anticoagulants may be decreased when used concurrently with hydrochlorothiazide; dosage adjustments may be necessary. Clinically insignificant reductions in arterial responsiveness to norepinephrine have been reported. Thiazides have also been shown to increase the paralyzing effect of nondepolarizing muscle relaxants such as tubocurarine. Triamterene is a weak folic acid antagonist. Do periodic blood studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in post-sympathectomy patients. Use cautiously in surgical patients. Triamterene has been found in renal stones in association with the other usual calculus components. Therefore, 'Dyazide' should be used with caution in patients with histories of stone formation. A few occurrences of acute renal failure have been reported in patients on 'Dyazide' when treated with indomethacin. Therefore, caution is advised in administering nonsteroidal anti-inflammatory agents with 'Dyazide'. The following may occur: transient elevated BUN or creatinine or both, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), hyperuricemia and gout, digitalis intoxication (in hypokalemia), decreasing alkali reserve with possible metabolic acidosis. 'Dyazide' interferes with fluorescent measurement of quinidine. Hypokalemia is uncommon with 'Dyazide', but should it develop, corrective measures should be taken such as potassium supplementation or increased dietary intake of potassium-rich foods. Corrective measures should be instituted cautiously and serum potassium levels determined. Discontinue corrective measures and 'Dyazide' should laboratory values reveal elevated serum potassium. Chloride deficit may occur as well as dilutional hyponatremia. Concurrent use with chlorpropamide may increase the risk of severe hyponatremia. Serum PBI levels may decrease without signs of thyroid disturbance. Calcium excretion is decreased by thiazides. 'Dyazide' should be withdrawn before conducting tests for parathyroid function.

Thiazides may add to or potentiate the action of other antihypertensive drugs.

Diuretics reduce renal clearance of lithium and increase the risk of lithium toxicity.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis, rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting, diarrhea, constipation, other gastrointestinal disturbances; postural hypotension (may be aggravated by alcohol, barbiturates, or narcotics). Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and respiratory distress including pneumonitis and pulmonary edema, transient blurred vision, sialadenitis, and vertigo have occurred with thiazides alone. Triamterene has been found in renal stones in association with other usual calculus components. Rare incidents of acute interstitial nephritis have been reported. Impotence has been reported in a few patients on 'Dyazide', although a causal relationship has not been established.

Supplied: **'Dyazide' is supplied as a red and white capsule, in bottles of 1000 capsules; Single Unit Packages (unit-dose) of 100 (intended for institutional use only); in Patient-Pak™ unit-of-use bottles of 100.**

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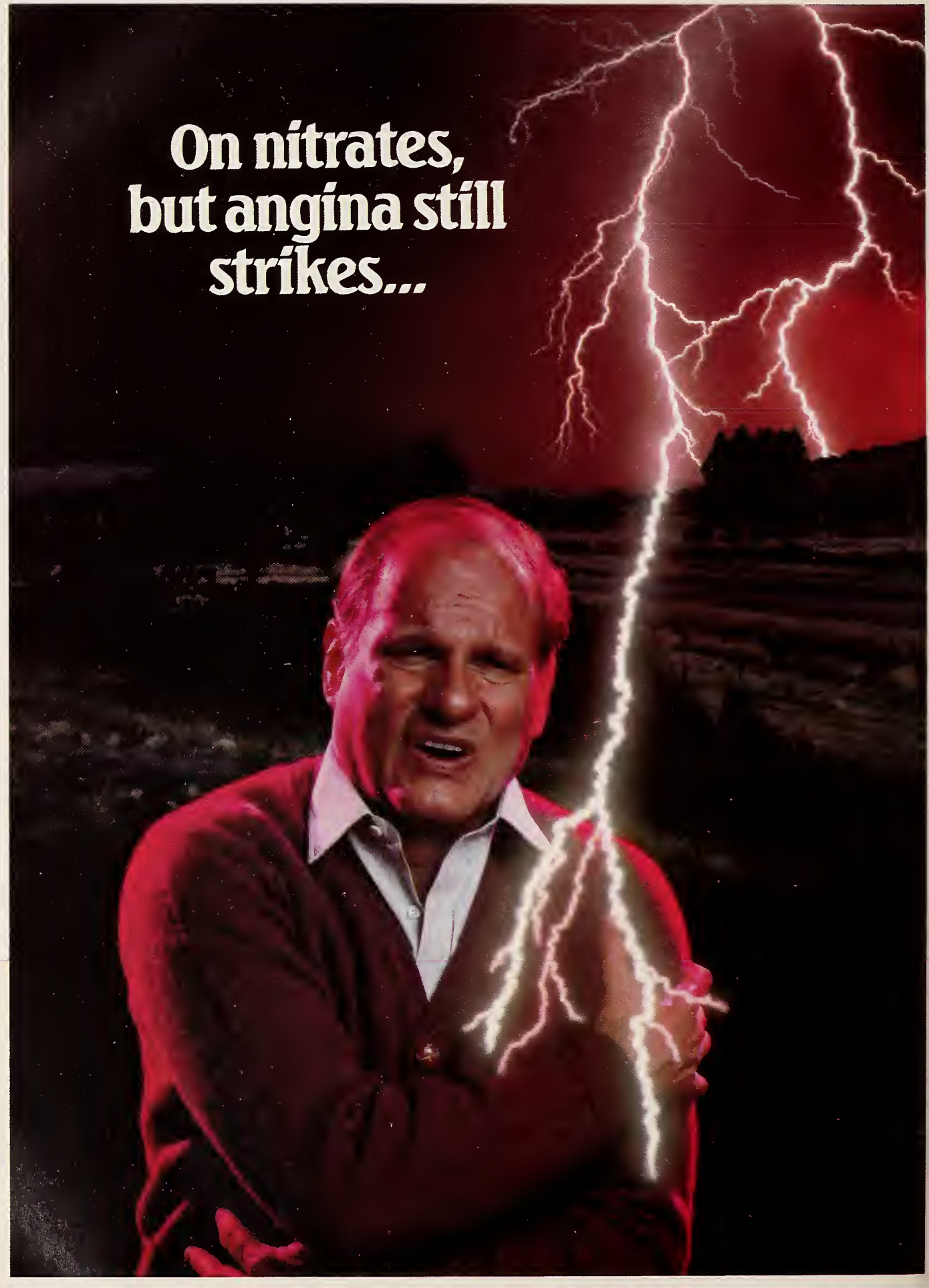


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(verapamil HCl/Knoll)
80 mg and 120 mg

Contraindications: Severe left ventricular dysfunction (see *Warnings*), hypotension (systolic pressure <90 mm Hg) or cardiogenic shock, sick sinus syndrome (if no pacemaker is present), 2nd- or 3rd-degree AV block. **Warnings:** ISOPTIN should be avoided in patients with severe left ventricular dysfunction (e.g., ejection fraction <30%) or moderate to severe symptoms of cardiac failure. Control milder heart failure with optimum digitalization and/or diuretics before ISOPTIN is used. ISOPTIN may occasionally produce hypotension (usually asymptomatic, orthostatic, mild, and controlled by decrease in ISOPTIN dose). Occasional elevations of liver enzymes have been reported; patients receiving ISOPTIN should have liver enzymes monitored periodically. Patients with atrial flutter/fibrillation and an accessory AV pathway (e.g., W-P-W or L-G-L syndromes) may develop a very rapid ventricular response after receiving ISOPTIN (or digitalis). Treatment is usually D.C.-cardioversion. AV block may occur (3rd degree, 0.8%). Development of marked 1st-degree block or progression to 2nd- or 3rd-degree block requires reduction in dosage or, rarely, discontinuation and institution of appropriate therapy. Sinus bradycardia, 2nd-degree AV block, sinus arrest, pulmonary edema, and/or severe hypotension were seen in some critically ill patients with hypertrophic cardiomyopathy who were treated with ISOPTIN. **Precautions:** ISOPTIN should be given cautiously to patients with impaired hepatic function (in severe dysfunction use about 30% of the normal dose) or impaired renal function, and patients should be monitored for abnormal prolongation of the PR interval or other signs of overdosage. Studies in a small number of patients suggest that concomitant use of ISOPTIN and beta blockers may be beneficial in patients with chronic stable angina. Combined therapy can also have adverse effects on cardiac function. Therefore, until further studies are completed, ISOPTIN should be used alone, if possible. If combined therapy is used, patients should be monitored closely. Combined therapy with ISOPTIN and propranolol should usually be avoided in patients with AV conduction abnormalities and/or depressed left ventricular function or in patients who have also recently received methyldopa. Chronic ISOPTIN treatment increases serum digoxin levels by 50% to 70% during the first week of therapy, which can result in digitalis toxicity. The digoxin dose should be reduced when ISOPTIN is given, and the patient carefully monitored. ISOPTIN may have an additive hypotensive effect in patients receiving blood-pressure-lowering agents. Disopyramide should not be given within 48 hours before or 24 hours after ISOPTIN administration. Until further data are obtained, combined ISOPTIN and quinidine therapy in patients with hypertrophic cardiomyopathy should probably be avoided, since significant hypotension may result. Adequate animal carcinogenicity studies have not been performed. One study in rats did not suggest a tumorigenic potential, and verapamil was not mutagenic in the Ames test. *Pregnancy Category C*: There are no adequate and well-controlled studies in pregnant women. This drug should be used during pregnancy, labor, and delivery only if clearly needed. It is not known whether verapamil is excreted in breast milk; therefore, nursing should be discontinued during ISOPTIN use. **Adverse Reactions:** Hypotension (2.9%), peripheral edema (1.7%), AV block: 3rd degree (0.8%), bradycardia: HR<50/min (1.1%), CHF or pulmonary edema (0.9%), dizziness (3.6%), headache (1.8%), fatigue (1.1%), constipation (6.3%), nausea (1.6%). The following reactions, reported in less than 0.5%, occurred under circumstances where a causal relationship is not certain: confusion, paresthesia, insomnia, somnolence, equilibrium disorders, blurred vision, syncope, muscle cramps, shakiness, claudication, hair loss, maculae, and spotty menstruation. Overall continuation rate of 94.5% in 1,166 patients. **How Supplied:** ISOPTIN (verapamil HCl) is supplied in 80 mg and 120 mg sugar-coated tablets. July 1982 2068

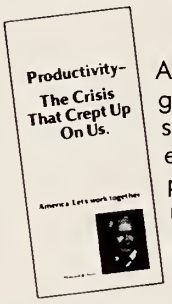
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> Soter NA, Wasserman SI, Austen KF. Cold urticaria release into circulation of histamine and eosinophil chemotactic factor of anaphylaxis during cold challenge. N Engl J Med 1976;294:687-90.

NEWS NOTES — District and county medical societies, Association members, and readers are invited to send in any news items of general concern to members of the Medical Association of Georgia.

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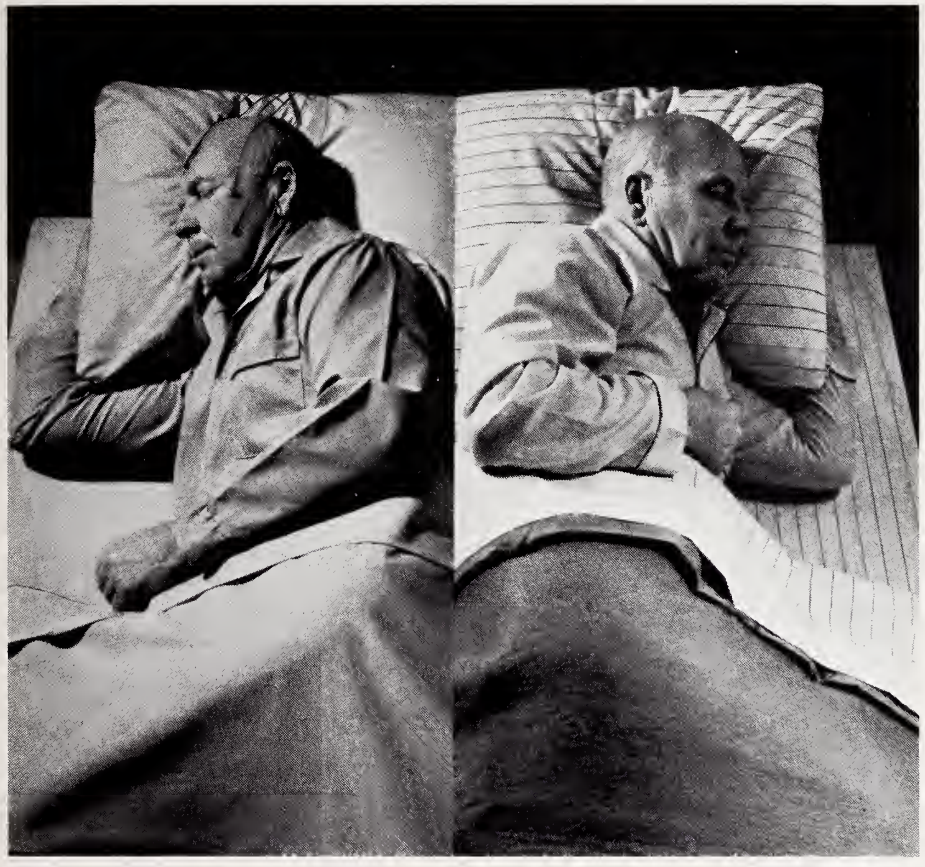
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References: 1. Kales J *et al: Clin Pharmacol Ther* 12:691-697, Jul-Aug 1971. **2.** Kales A *et al. Clin Pharmacol Ther* 18:356-363, Sep 1975. **3.** Kales A *et al: Clin Pharmacol Ther* 19:576-583, May 1976. **4.** Kales A *et al: Clin Pharmacol Ther* 32:781-788, Dec 1982. **5.** Frost JD Jr, DeLucchi MR: *J Am Geriatr Soc* 27:541-546, Dec 1979. **6.** Kales A, Kales JD: *J Clin Pharmacol* 3:140-150, Apr 1983. **7.** Greenblatt DJ, Allen MD, Shader RI: *Clin Pharmacol Ther* 21:355-361, Mar 1977. **8.** Zimmerman AM: *Curr Ther Res* 13:18-22, Jan 1971. **9.** Amrein R *et al: Drugs Exp Clin Res* 9(1):85-99, 1983. **10.** Monti JM: *Methods Find Exp Clin Pharmacol* 3:303-326, May 1981. **11.** Greenblatt DJ *et al: Sleep* 5(Suppl 1):S18-S27, 1982. **12.** Kales A *et al: Pharmacology* 26:121-137, 1983.

DALMANE® (IV)
flurazepam HCl/Roche

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Effective in all types of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening; in patients with recurring insomnia or poor sleeping habits; in acute or chronic medical situations requiring restful sleep. Objective sleep laboratory data have shown effectiveness for at least 28 consecutive nights of administration. Since insomnia is often transient and intermittent, prolonged administration is generally not necessary or recommended. Repeated therapy should only be undertaken with appropriate patient evaluation.

Contraindications: Known hypersensitivity to flurazepam HCl; pregnancy. Benzodiazepines may cause fetal damage when administered during pregnancy. Several studies suggest an increased risk of congenital malformations associated with benzodiazepine use during the first trimester. Warn patients of the potential risks to the fetus should the possibility of becoming pregnant exist while receiving flurazepam. Instruct patient to discontinue drug prior to becoming pregnant. Consider the possibility of pregnancy prior to instituting therapy.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. An additive effect may occur if alcohol is consumed the day following use for nighttime sedation. This potential may exist for several days following discontinuation. Caution against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Potential impairment of performance of such activities may occur the day following ingestion. Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, abrupt discontinuation should be avoided with gradual tapering of dosage for those patients on medication for a prolonged period of time. Use caution in administering to addiction-prone individuals or those who might increase dosage.

Precautions: In elderly and debilitated patients, it is recommended that the dosage be limited to 15 mg to reduce risk of oversedation, dizziness, confusion and/or ataxia. Consider potential additive effects with other hypnotics or CNS depressants. Employ usual precautions in severely depressed patients, or in those with latent depression or suicidal tendencies, or in those with impaired renal or hepatic function.

Adverse Reactions: Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported: headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of leukopenia, granulocytopenia, sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations, and elevated SGOT, SGPT, total and direct bilirubins, and alkaline phosphatase; and paradoxical reactions, *e.g.*, excitement, stimulation and hyperactivity.

Dosage: Individualize for maximum beneficial effect. *Adults:* 30 mg usual dosage; 15 mg may suffice in some patients. *Elderly or debilitated patients:* 15 mg recommended initially until response is determined.

Supplied: Capsules containing 15 mg or 30 mg flurazepam HCl.

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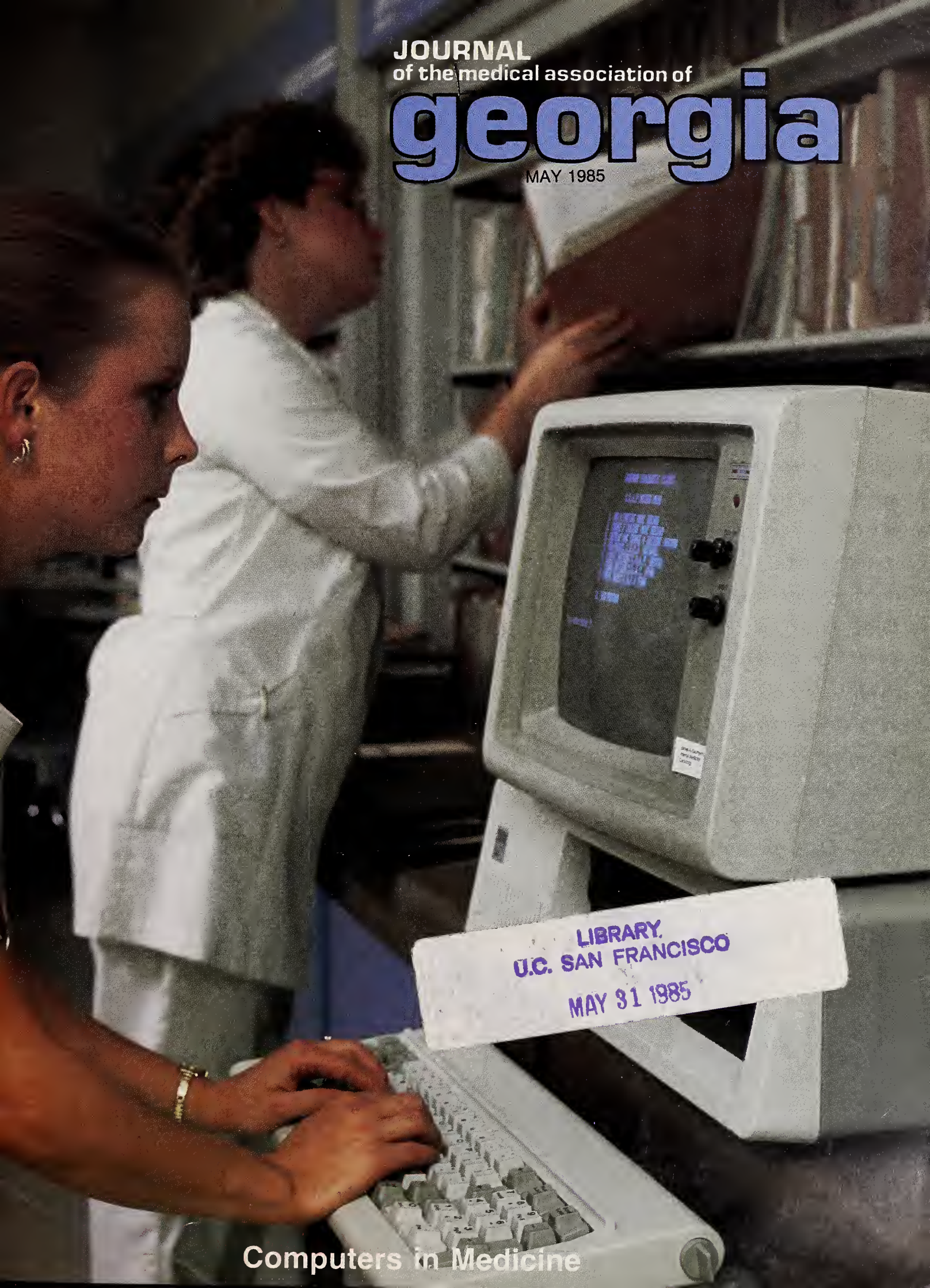
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15-MG/30-MG CAPSULES



See preceding page for references and summary of product information.

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See following page for brief summary of prescribing information.

SORBITRATE®
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Please consult full prescribing information before use. A summary follows:

INDICATIONS AND USAGE: SORBITRATE (isosorbide dinitrate) is indicated for the treatment and prevention of angina pectoris. All dosage forms of isosorbide dinitrate may be used prophylactically to decrease frequency and severity of anginal attacks and can be expected to decrease the need for sublingual nitroglycerin.

The sublingual and chewable forms of the drug are indicated for acute prophylaxis of angina pectoris when taken a few minutes before situations likely to provoke anginal attacks. Because of a slower onset of effect, the oral forms of isosorbide dinitrate are not indicated for acute prophylaxis.

CONTRAINDICATIONS: SORBITRATE is contraindicated in patients who have shown purported hypersensitivity or idiosyncrasy to it or other nitrates or nitrites. Epinephrine and related compounds are ineffective in reversing the severe hypotensive events associated with overdose and are contraindicated in this situation.

WARNINGS: The benefits of SORBITRATE during the early days of an acute myocardial infarction have not been established. If one elects to use organic nitrates in early infarction, hemodynamic monitoring and frequent clinical assessment should be used because of the potential deleterious effects of hypotension.

PRECAUTIONS: General: Severe hypotensive response, particularly with upright posture, may occur with even small doses of SORBITRATE. The drug should therefore be used with caution in subjects who may have blood volume depletion from diuretic therapy or in subjects who have low systolic blood pressure (eg, below 90 mmHg). Paradoxical bradycardia and increased angina pectoris may accompany nitrate-induced hypotension. Nitrate therapy may aggravate the angina caused by hypertrophic cardiomyopathy.

Marked symptomatic, orthostatic hypotension has been reported when calcium channel blockers and organic nitrates were used in combination. Dose adjustment of either class of agents may be necessary.

Tolerance to this drug and cross-tolerance to other nitrates and nitrites may occur. Tolerance to the vascular and antianginal effects of isosorbide dinitrate or nitroglycerin has been demonstrated in clinical trials, experience through occupational exposure, and in isolated tissue experiments in the laboratory. The importance of tolerance to the appropriate use of isosorbide dinitrate in the management of patients with angina pectoris has not been determined. However, one clinical trial using treadmill exercise tolerance (as an end point) found an 8-hour duration of action of oral isosorbide dinitrate following the first dose (after a 2-week placebo washout) and only a 2-hour duration of effect of the same dose after 1 week of repetitive dosing at conventional dosing intervals. On the other hand, several trials have been able to differentiate isosorbide dinitrate from placebo after 4 weeks of therapy and, in open trials, an effect seems detectable for as long as several months.

Tolerance clearly occurs in industrial workers continuously exposed to nitroglycerin. Moreover, physical dependence also occurs since chest pain, acute myocardial infarction, and even sudden death have occurred during temporary withdrawal of nitroglycerin from the workers. In clinical trials in angina patients, there are reports of anginal attacks being more easily provoked and of rebound in the hemodynamic effects soon after nitrate withdrawal. The relative importance of these observations to the routine, clinical use of isosorbide dinitrate is not known. However, it seems prudent to gradually withdraw patients from isosorbide dinitrate when the therapy is being terminated, rather than stopping the drug abruptly.

Information for Patients: Headache may occur during initial therapy with SORBITRATE. Headache is usually relieved by the use of standard headache remedies or by lowering the dose and tends to disappear after the first week or two of use.

Drug Interactions: Alcohol may enhance any marked sensitivity to the hypotensive effect of nitrates.

Isosorbide dinitrate acts directly on vascular smooth muscle; therefore, any other agent that depends on vascular smooth muscle as the final common path can be expected to have decreased or increased effect depending on the agent.

Carcinogenesis, Mutagenesis, Impairment of Fertility: No long-term studies in animals have been performed to evaluate the carcinogenic potential of this drug. A modified two-litter reproduction study in rats fed isosorbide dinitrate at 25 or 100 mg/kg/day did not reveal any effects on fertility or gestation or any remarkable gross pathology in any parent or offspring fed isosorbide dinitrate as compared with rats fed a basal-controlled diet.

Pregnancy Category C: Isosorbide dinitrate has been shown to cause a dose-related increase in embryotoxicity (increase in mummified pups) in rabbits at oral doses 35 and 150 times the maximum recommended human daily dose. There are no adequate and well-controlled studies in pregnant women. SORBITRATE should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers: It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when SORBITRATE is administered to a nursing woman.

Pediatric Use: The safety and effectiveness of SORBITRATE in children has not been established.

ADVERSE REACTIONS: Adverse reactions, particularly headache and hypotension, are dose-related. In clinical trials at various doses, the following have been observed:

Headache is the most common (reported incidence varies widely, apparently being dose-related, with an average occurrence of about 25%) adverse reaction and may be severe and persistent. Cutaneous vasodilation with flushing may occur. Transient episodes of dizziness and weakness, as well as other signs of cerebral ischemia associated with postural hypotension, may occasionally develop (the incidence of reported symptomatic hypotension ranges from 2% to 36%). An occasional individual will exhibit marked sensitivity to the hypotensive effects of nitrates and severe responses (nausea, vomiting, weakness, restlessness, pallor, perspiration, and collapse) may occur even with the usual therapeutic dose. Drug rash and/or exfoliative dermatitis may occasionally occur. Nausea and vomiting appear to be uncommon. Case reports of clinically significant methemoglobinemia are rare at conventional doses of organic nitrates. The formation of methemoglobin is dose-related and, in the case of genetic abnormalities of hemoglobin that favor methemoglobin formation, even conventional doses of organic nitrate could produce harmful concentrations of methemoglobin.

DOSAGE AND ADMINISTRATION: For the treatment of angina pectoris, the usual starting dose for sublingual SORBITRATE is 2.5 to 5 mg; for chewable tablets, 5 mg; for oral (swallowed) tablets, 5 to 20 mg; and for controlled-release forms, 40 mg.

SORBITRATE should be titrated upward until angina is relieved or side effects limit the dose. In ambulatory patients, the magnitude of the incremental dose increase should be guided by measurements of standing blood pressure.

The initial dosage of sublingual or chewable SORBITRATE for prophylactic therapy in angina pectoris patients is generally 5 or 10 mg every 2 to 3 hours. Adequate controlled clinical studies demonstrating the effectiveness of chronic maintenance therapy with these dosage forms have not been reported.

SORBITRATE in oral doses of 10 to 40 mg given every 6 hours or in oral controlled-release doses of 40 to 80 mg given every 8 to 12 hours is generally recommended. The extent to which development of tolerance should modify the dosage program has not been defined. *The oral controlled-release forms of isosorbide dinitrate should not be chewed.*

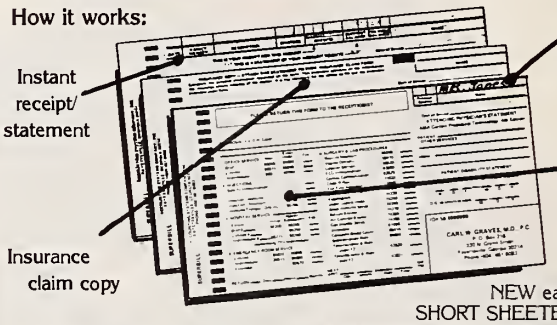
DOSAGE FORMS AVAILABLE: Sublingual Tablets (2.5, 5, 10 mg); Chewable Tablets (5, 10 mg); Oral Tablets (5, 10, 20, 30, 40 mg); Sustained Action Tablets (40 mg).

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Photography by Chuck Rogers, Atlanta.

Incidental Intelligence . . .

PROPAC Recommendations

Medicare rates in fiscal 1986 would rise by an estimated 1% to 3% under a formula recommended by a panel Congress set up to advise Medicare officials on future rates and changes in Medicare's prospective pricing system.

The recommendation by the Prospective Payment Assessment Commission (PROPAC) contrasts with a Reagan Administration budget proposal to freeze the 1986 rates for each of the program's 468 diagnosis related groups. Payments to hospitals in fiscal 1986 would be from $320 to $960 million greater under the PROPAC proposal than in the Administration plan.

When Congress created PROPAC in the same law that set up the DRG payments, it said that after 1986, the Secretary of Health and Human Services should consult with PROPAC in the development of new rates. HHS is not required to accept PROPAC's advice, however, and the reaction of Congress and the Reagan Administration to the Commission's recommendations suggested 1986 rate increases could serve as a key test of PROPAC's influence and future.

Adopted unanimously by the 15 PROPAC members, the rate update is one of 21 recommendations included in a report that PROPAC presented to Congress April 1. Other recommendations call for improving a wage index that many believe is unfair to rural hospitals; development of special rates for hospitals that treat an especially large percentage of indigent patients; and "recalibration" or revision of the relative weights of the DRGs in 1986.

The commissioners also studied several procedures where the current DRG assignments and weights have been questioned. They concluded that cases in which percutaneous transluminal coronary angioplasty (PTCA) is the principal procedure should be temporarily reassigned from DRG 108 to DRG 112. Study on this issue will continue, however, and the procedure may be reassigned to DRG 125 at some later date.

On the other hand, the PROPAC members recommended the DRGs involving cardiac pacemaker implants, bone marrow transplantation, and cataract extractions and intraocular lens implants should not be altered until the DRG weights are recalibrated. PROPAC has submitted an additional report on its pacemaker recommendations to Congress and will continue to study all of the above procedures.

Mandatory Second Opinions

Medicare might save more than $1 billion a year if patients recommended for nine types of elective surgery were required to seek a second opinion, according to a report from the Senate Aging Committee.

The report estimated that the nine types of surgery (pacemaker, cataract, gall bladder, prostate, knee, hysterectomy, back, hernia, and hemorrhoidectomy) are performed unnecessarily in 17% to 35% of cases. It projected Medicare savings of $734 to $1.18 billion.

Senate Aging Committee Chairman Sen. John Heinz (R-PA), who released the report at a March 14 hearing, said he may introduce legislation to require second surgical opinions in Medicare and Medicaid. Other committee members, including ranking Ohio Democrat John Glenn, appeared ready to cosponsor such legislation, which Heinz indicated that he may push as a substitute for budget proposals to increase beneficiary cost-sharing.

Heinz is siding with Department of Health and Human Services Inspector General Richard Kusserow in a long-simmering dispute with the Health Care Financing Administration. The dispute traces back to the IG's recommendation in early 1983 that Medicare and Medicaid require second surgical opinions for the nine procedures.

Medicare has paid for voluntary second opinions since 1977 and both the IG and HCFA agree that the voluntary program has had little impact on surgical rates. Both offices also concur that Medicaid programs mandating second opinions for selected procedures appear to have saved money, $1 million a year in Massachusetts, for instance.

Both also agree that most savings from the mandated second opinions are not directly due to patient's foregoing surgery but stem instead from the "sentinel effect" in which physicians simply don't recommend certain procedures because they are aware that their decision will be questioned. About 90% of the Massachusetts savings were attributed to the "sentinel effect."

Patient Protection Act

The American Medical Association is now warning medical licensing boards of about 40 cases a month in which an MD licensed in several states has just been disciplined by one of the jurisdictions, the AMA told Members of the House in March.

The effort, undertaken with the Federation of State Medical Licensure Boards, followed a three-state study by the General Accounting Office that found that 10% of practitioners whose licenses were revoked in one state later billed Medicare and Medicaid for treating patients in another state.

Under current law, Medicare and Medicaid generally can exclude these practitioners only if they are convicted of fraud or abuse against the particular program involved. The GAO recommended that the Department of Health and Human Services be given authority to exclude from participation in federal health programs any practitioner who has been convicted of fraud or abuse in another federal program or whose license had been removed by a state licensing board.

Although the recommendation was supported at the time by the HHS Inspector General as well as by the AMA and other professional groups, differences developed over legislation to implement the recommendation. Swept aside as Congress got tied up in budget bills at the end of the last session, the legislation has now been reintroduced, and as a recent hearing before the House Ways and Means and Commerce health subcommittees revealed, several differences remain.

Called The Medicare and Medicaid Patient and Program Protection Act of 1985 (HR 1370), the measure was introduced by Rep. Henson Moore (R-LA) and cosponsored by many of the members of the two subcommittees. It would authorize the Department of Health and Human Services to exclude from federal health programs any provider who has been convicted of financial, patient, or controlled substances abuse; who has lost or surrendered for cause a medical license or the right to participate in any federal program; or who has furnished excessive or poor quality care. An HMO could be excluded for not providing an adequate number of services.

Providers could also be excluded for failing to grant access to records or information about subcontractors or if a civil monetary penalty had been assessed against them. All exclusions would be for a minimum of five years. States would be required to notify a clearinghouse at HHS or an organization designated by HHS of disciplinary actions by state licensing boards.

Although the thrust of the bill is supported by patient representatives, physician groups, and the Inspector General, some medical groups believe the legislation now goes beyond the original recommendations of the GAO while senior citizens organizations believe it does not go far enough. Debate has centered on the 5-year minimum exclusion, the HHS clearinghouse, and the exclusions of physicians or HMOs providing excessive or inadequate numbers of services.

Testifying for the AMA, Board of Trustees member John Ring, MD, described the Association's use of its physician masterfile to notify the state boards of disciplinary actions against MDs licensed in more than one jurisdiction. He also reported that this effort will be expanded to notify the boards whenever the AMA learns of a physician's death.

While endorsing legislation to bar physicians who lose their license for incompetence from Medicare and Medicaid, however, Dr. Ring raised several concerns with HR 1370. The 5-year minimum exclusion from federal programs does not give HHS enough discretion to deal with the "various levels of culpability" or fraud that might be encountered, he argued. An HHS clearinghouse of state disciplinary actions would duplicate efforts already taking place, and the authority to exclude providers who deliver excessive or poor quality care has been given and should remain with Peer Review Organizations (PROs).

Defending the minimum 5-year exclusion, HHS Inspector General Richard Kusserow asserted that any provider that defrauds Medicare or Medicaid should be excluded from the programs "for as long as the earth spins on its axis."

CBO Budget Options

Congress could consider several alternatives to President Reagan's proposal to continue a freeze on all physician's Medicare fees for another year, the Congressional Budget Office (CBO) has suggested.

One alternative would permit fees to rise for some physicians who signed Medicare participating agreements in fiscal 1985. Others are variations on a Medicare fee schedule.

Spelled out in a recent CBO report entitled, "Reducing the Deficit Spending and Revenue Options," the package of alternatives also offers provisions to moderate the President's recommended reductions in Medicare payments for graduate medical education. It offers no alternatives to hospital rates.

Suggested revenue-raising proposals include a tax on employer-paid health insurance premiums and several alternatives for increasing Medicare premiums, deductibles, and taxes. The CBO hikes in Medicare premiums, deductibles, and taxes would cost beneficiaries more than the President's proposals. In looking at curbs on Medicare payments to physicians, the CBO estimated that the Reagan Administration's plan to extend the current freeze on Medicare customary and prevailing fees until October 1, 1986, would save $490 million in fiscal 1986 and $3.2 billion through 1990.

As an alternative, the Budget office suggested, Congress could update the customary fee allowances for individual participating physicians. Since the ceilings on then prevailing community rates would remain frozen, only participating physicians with fees lower than the prevailing fee ceiling would receive fee increases. Or, the report advised, Congress could pay physicians according to a fee schedule based on the national average allowed for each procedure in the previous year. The schedule would be adjusted for regional cost variations and updated in following years by the increase in the Medicare economic index.

Super-PRO

Having scaled down their demands for a contractor to monitor Medicare's Peer Review Organizations (PROs), Health Care Financing Administration officials are preparing to reopen bids for the so-called Super-PRO contract.

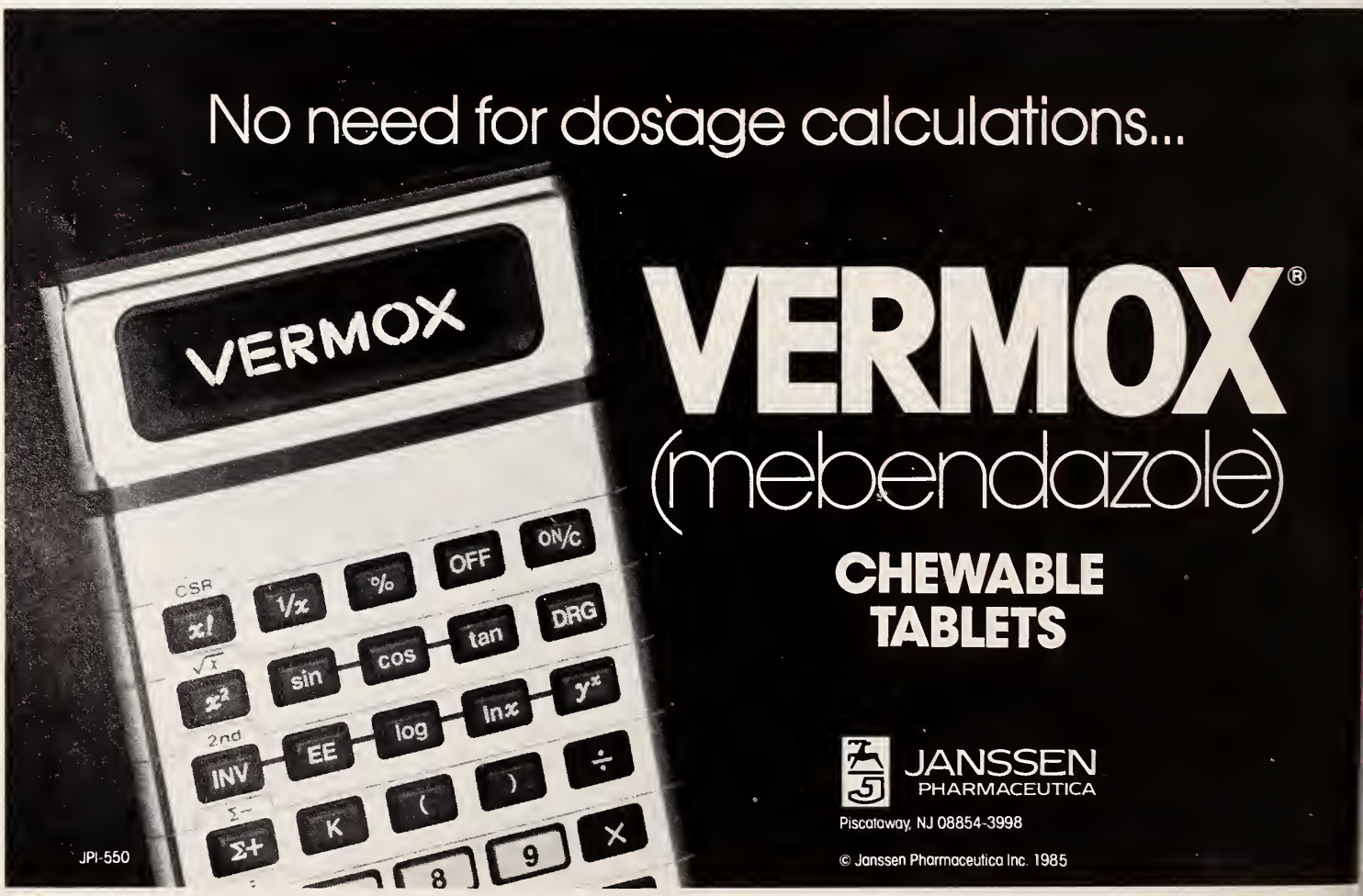
All four bids in an earlier round of bidding, including one from the American Medical Association, were turned down as nonresponsive, reportedly in large part because they exceeded the funds available for the contract.

Although HCFA officials said they could not discuss funding in a competitive bidding situation, they did acknowledge that the work load the Super-PRO will be asked to perform has been reduced. Industry sources said they believed HCFA wants to hold the price of the contract to about $5 or $6 million.

In addition to the usual notification in the Commerce Business Daily, the Medicare officials are seeking widespread press announcements of the latest bid solicitation. The objective is to bring the contract to the attention of more potential bidders. A request for bid proposals (RFPs) was to be carried in Commerce Business Daily in early April.

This new solicitation differs from the earlier one in that it appears to be worded so as to appeal to a wider variety of organizations. It also requires semi-annually reports rather than quarterly and has reduced the types of review requested.


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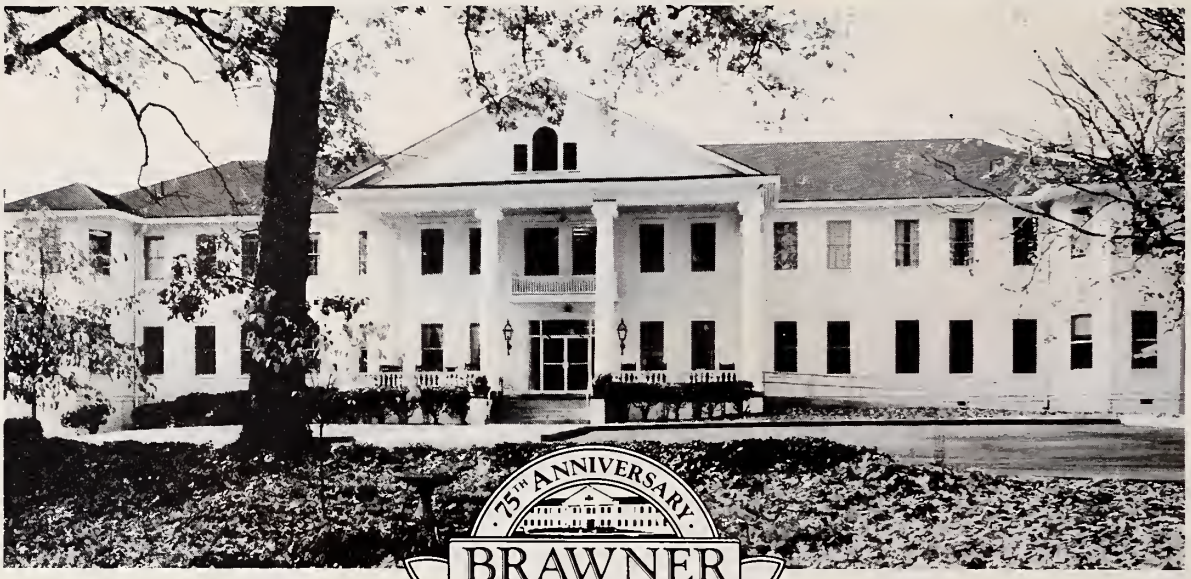
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References:
1. Strauss WE, McIntyre KM, Parisi AF, et al: Safety and efficacy of diltiazem hydrochloride for the treatment of stable angina pectoris: Report of a cooperative clinical trial. Am J Cardiol 49:560-566, 1982.
2. Pool PE, Seagren SC, Bonanno JA, et al: The treatment of exercise-inducible chronic stable angina with diltiazem: Effect on treadmill exercise. Chest 78 (July suppl):234-238, 1980.

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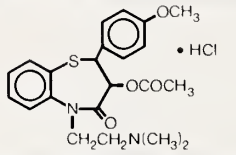
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PROFESSIONAL USE INFORMATION

cardizem®
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30 mg and 60 mg tablets

DESCRIPTION

CARDIZEM® (diltiazem hydrochloride) is a calcium ion influx inhibitor (slow channel blocker or calcium antagonist). Chemically, diltiazem hydrochloride is 1,5-Benzothiazepin-4(5H)one,3-(acetyloxy) -5-[2-(dimethylamino)ethyl]-2,3-dihydro-2-(4-methoxyphenyl)-, monohydrochloride,(+) -cis-. The chemical structure is:



Diltiazem hydrochloride is a white to off-white crystalline powder with a bitter taste. It is soluble in water, methanol, and chloroform. It has a molecular weight of 450.98. Each tablet of CARDIZEM contains either 30 mg or 60 mg diltiazem hydrochloride for oral administration.

CLINICAL PHARMACOLOGY

The therapeutic benefits achieved with CARDIZEM are believed to be related to its ability to inhibit the influx of calcium ions during membrane depolarization of cardiac and vascular smooth muscle.

Mechanisms of Action. Although precise mechanisms of its antianginal actions are still being delineated, CARDIZEM is believed to act in the following ways:

1. Angina Due to Coronary Artery Spasm: CAROIZEM has been shown to be a potent dilator of coronary arteries both epicardial and subendocardial. Spontaneous and ergonovine-induced coronary artery spasm are inhibited by CARDIZEM.
2. Exertional Angina: CARDIZEM has been shown to produce increases in exercise tolerance, probably due to its ability to reduce myocardial oxygen demand. This is accomplished via reductions in heart rate and systemic blood pressure at submaximal and maximal exercise work loads.

In animal models, diltiazem interferes with the slow inward (depolarizing) current in excitable tissue. It causes excitation-contraction uncoupling in various myocardial tissues without changes in the configuration of the action potential. Diltiazem produces relaxation of coronary vascular smooth muscle and dilation of both large and small coronary arteries at drug levels which cause little or no negative inotropic effect. The resultant increases in coronary blood flow (epicardial and subendocardial) occur in ischemic and nonischemic models and are accompanied by dose-dependent decreases in systemic blood pressure and decreases in peripheral resistance.

Hemodynamic and Electrophysiologic Effects. Like other calcium antagonists, diltiazem decreases sinoatrial and atrioventricular conduction in isolated tissues and has a negative inotropic effect in isolated preparations. In the intact animal, prolongation of the AH interval can be seen at higher doses.

In man, diltiazem prevents spontaneous and ergonovine-provoked coronary artery spasm. It causes a decrease in peripheral vascular resistance and a modest fall in blood pressure and, in exercise tolerance studies in patients with ischemic heart disease, reduces the heart rate-blood pressure product for any given work load. Studies to date, primarily in patients with good ventricular function, have not revealed evidence of a negative inotropic effect; cardiac output, ejection fraction, and left ventricular end diastolic pressure have not been affected. There are as yet few data on the interaction of diltiazem and beta-blockers. Resting heart rate is usually unchanged or slightly reduced by diltiazem.

Intravenous diltiazem in doses of 20 mg prolongs AH conduction time and AV node functional and effective refractory periods approximately 20%. In a study involving single oral doses of 300 mg of CARDIZEM in six normal volunteers, the average maximum PR prolongation was 14% with no instances of greater than first-degree AV block. Diltiazem-associated prolongation of the AH interval is not more pronounced in patients with first-degree heart block. In patients with sick sinus syndrome, diltiazem significantly prolongs sinus cycle length (up to 50% in some cases).

Chronic oral administration of CARDIZEM in doses of up to 240 mg/day has resulted in small increases in PR interval, but has not usually produced abnormal prolongation. There were, however, three instances of second-degree AV block and one instance of third-degree AV block in a group of 959 chronically treated patients.

Pharmacokinetics and Metabolism. Diltiazem is absorbed from the tablet formulation to about 80% of a reference capsule and is subject to an extensive first-pass effect, giving an absolute bioavailability (compared to intravenous dosing) of about 40%. CARDIZEM undergoes extensive hepatic metabolism in which 2% to 4% of the unchanged drug appears in the urine. In vitro binding studies show CARDIZEM is 70% to 80% bound to plasma proteins. Competitive ligand binding studies have also shown CARDIZEM binding is not altered by therapeutic concentrations of digoxin, hydrochlorothiazide, phenylbutazone, propranolol, salicylic acid, or warfarin. Single oral doses of 30 to 120 mg of CARDIZEM result in detectable plasma levels within 30 to 60 minutes and peak plasma levels two to three hours after drug administration. The plasma elimination half-life following single or multiple drug administration is approximately 3.5 hours. Desacetyl diltiazem is also present in the plasma at levels of 10% to 20% of the parent drug and is 25% to 50% as potent a coronary vasodilator as diltiazem. Therapeutic blood levels of CARDIZEM appear to be in the range of 50 to 200 ng/ml. There is a departure from dose-linearity when single doses above 60 mg are given; a 120-mg dose gave blood levels three times that of the 60-mg dose. There is no information about the effect of renal or hepatic impairment on excretion or metabolism of diltiazem.

INDICATIONS AND USAGE

1. **Angina Pectoris Due to Coronary Artery Spasm.** CARDIZEM is indicated in the treatment of angina pectoris due to coronary artery spasm. CARDIZEM has been shown effective in the treatment of spontaneous coronary artery spasm presenting as Prinzmetal's variant angina (resting angina with ST-segment elevation occurring during attacks).
2. **Chronic Stable Angina (Classic Effort-Associated Angina).** CARDIZEM is indicated in the management of chronic stable angina. CARDIZEM has been effective in controlled trials in reducing angina frequency and increasing exercise tolerance.

There are no controlled studies of the effectiveness of the concomitant use of diltiazem and beta-blockers or of the safety of this combination in patients with impaired ventricular function or conduction abnormalities.

CONTRAINDICATIONS

CARDIZEM is contraindicated in (1) patients with sick sinus syndrome except in the presence of a functioning ventricular pacemaker, (2) patients with second- or third-degree AV block except in the presence of a functioning ventricular pacemaker, and (3) patients with hypotension (less than 90 mm Hg systolic).

WARNINGS

1. **Cardiac Conduction.** CARDIZEM prolongs AV node refractory periods without significantly prolonging sinus node recovery time, except in patients with sick sinus syndrome. This effect may rarely result in abnormally slow heart rates (particularly in patients with sick sinus syndrome) or second- or third-degree AV block (six of 1243 patients for 0.48%). Concomitant use of diltiazem with beta-blockers or digitalis may result in additive effects on cardiac conduction. A patient with Prinzmetal's angina developed periods of asystole (2 to 5 seconds) after a single dose of 60 mg of diltiazem.
2. **Congestive Heart Failure.** Although diltiazem has a negative inotropic effect in isolated animal tissue preparations, hemodynamic studies in humans with normal ventricular function have not shown a reduction in cardiac index nor consistent negative effects on contractility (dp/dt). Experience with the use of CARDIZEM alone or in combination with beta-blockers in patients with impaired ventricular function is very limited. Caution should be exercised when using the drug in such patients.
3. **Hypotension.** Decreases in blood pressure associated with CARDIZEM therapy may occasionally result in symptomatic hypotension.
4. **Acute Hepatic Injury.** In rare instances, patients receiving CARDIZEM have exhibited reversible acute hepatic injury as evidenced by moderate to extreme elevations of liver enzymes. (See PRECAUTIONS and ADVERSE REACTIONS.)

PRECAUTIONS

General. CARDIZEM (diltiazem hydrochloride) is extensively metabolized by the liver and excreted by the kidneys and in bile. As with any new drug given over prolonged periods, laboratory parameters should be monitored at regular intervals. The drug should be used with caution in patients with impaired renal or hepatic function. In subacute and chronic dog and rat studies designed to produce toxicity, high doses of diltiazem were associated with hepatic damage. In special subacute hepatic studies, oral doses of 125 mg/kg and higher in rats were associated with histological changes in the liver which were reversible when the drug was discontinued. In dogs, doses of 20 mg/kg were also associated with hepatic changes; however, these changes were reversible with continued dosing.

Drug Interaction. Pharmacologic studies indicate that there may be additive effects in prolonging AV conduction when using beta-blockers or digitalis concomitantly with CARDIZEM. (See WARNINGS).

Controlled and uncontrolled domestic studies suggest that concomitant use of CARDIZEM and beta-blockers or digitalis is usually well tolerated. Available data are not sufficient, however, to predict the effects of concomitant treatment, particularly in patients with left ventricular dysfunction or cardiac conduction abnormalities. In healthy volunteers, diltiazem has been shown to increase serum digoxin levels up to 20%.

Carcinogenesis, Mutagenesis, Impairment of Fertility. A 24-month study in rats and a 21-month study in mice showed no evidence of carcinogenicity. There was also no mutagenic response in in vitro bacterial tests. No intrinsic effect on fertility was observed in rats.

Pregnancy. Category C. Reproduction studies have been conducted in mice, rats, and rabbits. Administration of doses ranging from five to ten times greater (on a mg/kg basis) than the daily recommended therapeutic dose has resulted in embryo and fetal lethality. These doses, in some studies, have been reported to cause skeletal abnormalities. In the perinatal/postnatal studies, there was some reduction in early individual pup weights and survival rates. There was an increased incidence of stillbirths at doses of 20 times the human dose or greater.

There are no well-controlled studies in pregnant women; therefore, use CARDIZEM in pregnant women only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers. It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, exercise caution when CARDIZEM is administered to a nursing woman if the drug's benefits are thought to outweigh its potential risks in this situation.

Pediatric Use. Safety and effectiveness in children have not been established.

ADVERSE REACTIONS

Serious adverse reactions have been rare in studies carried out to date, but it should be recognized that patients with impaired ventricular function and cardiac conduction abnormalities have usually been excluded.

In domestic placebo-controlled trials, the incidence of adverse reactions reported during CARDIZEM therapy was not greater than that reported during placebo therapy.

The following represent occurrences observed in clinical studies which can be at least reasonably associated with the pharmacology of calcium influx inhibition. In many cases, the relationship to CARDIZEM has not been established. The most common occurrences, as well as their frequency of presentation, are: edema (2.4%), headache (2.1%), nausea (1.9%), dizziness (1.5%), rash (1.3%), asthenia (1.2%), AV block (1.1%). In addition, the following events were reported infrequently (less than 1%) with the order of presentation corresponding to the relative frequency of occurrence.

Cardiovascular:	Flushing, arrhythmia, hypotension, bradycardia, palpitations, congestive heart failure, syncope.
Nervous System:	Paresthesia, nervousness, somnolence, tremor, insomnia, hallucinations, and amnesia.
Gastrointestinal:	Constipation, dyspepsia, diarrhea, vomiting, mild elevations of alkaline phosphatase, SGOT, SGPT, and LDH.
Oermatologic:	Pruritus, petechiae, urticaria, photosensitivity.
Other:	Polyuria, nocturia.

The following additional experiences have been noted:

A patient with Prinzmetal's angina experiencing episodes of vasospastic angina developed periods of transient asymptomatic asystole approximately five hours after receiving a single 60-mg dose of CAROIZEM.

The following postmarketing events have been reported infrequently in patients receiving CAROIZEM: erythema multiforme; leukopenia; and extreme elevations of alkaline phosphatase, SGOT, SGPT, LDH, and CPK. However, a definitive cause and effect between these events and CARDIZEM therapy is yet to be established.

OVERDOSAGE OR EXAGGERATED RESPONSE

Overdosage experience with oral diltiazem has been limited. Single oral doses of 300 mg of CARDIZEM have been well tolerated by healthy volunteers. In the event of overdosage or exaggerated response, appropriate supportive measures should be employed in addition to gastric lavage. The following measures may be considered:

Bradycardia	Administer atropine (0.60 to 1.0 mg). If there is no response to vagal blockade, administer isoproterenol cautiously.
High-Degree AV Block	Treat as for bradycardia above. Fixed high-degree AV block should be treated with cardiac pacing.
Cardiac Failure	Administer inotropic agents (isoproterenol, dopamine, or dobutamine) and diuretics.
Hypotension	Vasopressors (eg, dopamine or levarterenol bitartrate).

Actual treatment and dosage should depend on the severity of the clinical situation and the judgment and experience of the treating physician.

The oral LD_{50}'s in mice and rats range from 415 to 740 mg/kg and from 560 to 810 mg/kg, respectively. The intravenous LD_{50}'s in these species were 60 and 38 mg/kg, respectively. The oral LD_{50} in dogs is considered to be in excess of 50 mg/kg, while lethality was seen in monkeys at 360 mg/kg. The toxic dose in man is not known, but blood levels in excess of 800 ng/ml have not been associated with toxicity.

DOSAGE AND ADMINISTRATION

Exertional Angina Pectoris Due to Atherosclerotic Coronary Artery Disease or Angina Pectoris at Rest Due to Coronary Artery Spasm. Dosage must be adjusted to each patient's needs. Starting with 30 mg four times daily, before meals and at bedtime, dosage should be increased gradually (given in divided doses three or four times daily) at one- to two-day intervals until optimum response is obtained. Although individual patients may respond to any dosage level, the average optimum dosage range appears to be 180 to 240 mg/day. There are no available data concerning dosage requirements in patients with impaired renal or hepatic function. If the drug must be used in such patients, titration should be carried out with particular caution.

Concomitant Use With Other Antianginal Agents:

1. **Sublingual NTG** may be taken as required to abort acute anginal attacks during CARDIZEM therapy.
2. **Prophylactic Nitrate Therapy**—CAROIZEM may be safely coadministered with short- and long-acting nitrates, but there have been no controlled studies to evaluate the antianginal effectiveness of this combination.
3. **Beta-blockers.** (See WARNINGS and PRECAUTIONS.)

HOW SUPPLIED

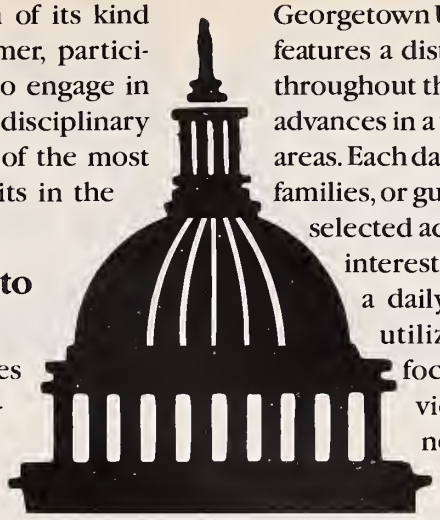
Cardizem 30-mg tablets are supplied in bottles of 100 (NOC 0088-1771-47) and in Unit Dose Identification Paks of 100 (NDC 0088-1771-49). Each green tablet is engraved with MARION on one side and 1771 engraved on the other. CARDIZEM 60-mg scored tablets are supplied in bottles of 100 (NDC 0088-1772-47) and in Unit Dose Identification Paks of 100 (NOC 0088-1772-49). Each yellow tablet is engraved with MARION on one side and 1772 on the other.

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—President's Letter—



Another Sack

Once upon a time, a South Georgia man and his wife came up to Atlanta, went in to one of the major banks, and insisted on seeing the president. The bank employees noticed that his wife was carrying a rather large sack.

After entering the president's office and introducing themselves, the man said they had brought some money to deposit into the bank. The president, somewhat amused at this unusual approach, said, "That's fine. Do you have the money with you?" The man took the sack from his wife and placed it on the desk and said, "There it is — $85,465.24."

The president suggested that the couple go have lunch and return in the early afternoon. This would allow time for them to count the money for a correct deposit.

When the couple returned to the bank, a very concerned president asked again the amount brought in the sack. "$85,465.24," said the man emphatically.

The president, with two of his staff by his side, said, "Sir, I'm very sorry but we have only counted $75,820.24." The man, somewhat perplexed, asked him to repeat the figure. The lower amount was given with assurance of repeated counts.

After several seconds, during which time the man's expression changed from quizzical to a somewhat embarrassed understanding, he turned to his wife and said softly, "Mama, we have brung the wrong sack."

Aside from the levity of this story, let me pursue the obvious point, that is, that there are additional assets that are sometimes left at home. I'm not talking of sacks of money. But rather, the tremendous educational pool of knowledge, the multiple talents, and the energy that you, the physicians of this state, represent. There is never a time when I am with a group of doctors that I'm not impressed at discovering the many things they do in addition to the everyday counseling, diagnosing, and technical feats performed with compassion and sacrifice. These activities cover nearly all facets of life.

I am also greatly impressed with the point that there has never been a greater need for us as a group to exercise all of our talents in order to offer our communities with a stable but progressive posture.

It is not enough that we are expected to be involved with pain, illness, and despair each day; we must also keep abreast of countless scientific advances; maintain family unity as spouses and parents — all this, while providing financial stability and security in our office and home. We are now challenged to come forward and provide energy and activity to aid in creating a healthier lifestyle. Whether we like it or not, we are "role models" and are looked upon by young and old alike as examples. The multiple weighty problems of extending or limiting life, making available or "rationing" health care has been thrust upon us. The gargantuan financial activity of medicine is being pulled and tugged at by politicians, institutions, and entrepreneurs. We too are intricately involved and must take an active part.

Activities and involvement in these issues will reach to the depth of our moral and ethical being. It will test our strength and talents.

Can we do this? Are we superbeings? No, not really. I'm sure of one thing — there are more sacks at home that haven't been counted yet.

Wm. D Logan Jr.

William D. Logan, Jr., M.D.

The Computer As a Medical Tool



Last autumn I was asked to examine an adolescent boy, the grandson of one of my internist colleagues, who had the unusual complaint of a numb chin. The numbness was present on both sides of the chin, in the distribution of the two mental nerves, and had been present for several weeks. His symptoms had eluded an accurate diagnosis. The history was unremarkable for any trauma. The boy's dentist had expressed some concern that the lower incisors were loosening. After taking a rather lengthy history, I sent the boy's mother out to the waiting room and sent him to the examination room to get undressed. In the few minutes it would take for him to get ready, I went to the small personal computer that sits on my desk and did what I usually do when I haven't got the slightest idea what the problem is.

After a 30-second sign-on procedure to the National Library of Medicine in Bethesda through BRS Colleagues and my modem, I asked for any references on "numb chin." A single reference,[1] complete with rather lengthy abstract, came up on the screen. Nineteen patients were reported who had numb chin as the sole presenting manifestation of a malignancy, of whom nine had lymphoreticular malignancies. I then examined the boy quite carefully, but could find nothing except the area of hypesthesia over the mental process. My first inclination was to send the boy home after getting a few perfunctory studies to keep from appearing uninterested. (I could hear the utilization review committee inquiring as to whether I wanted to pay for the boy's hospitalization out of my own pocket.) But then there was that article. . . . While racking my brain for the anatomy of the mental nerve, some 15 years after my last anatomy class, I told the boy and his mother that I wanted to hospitalize him for further diagnostic studies. Later that afternoon, a CT scan showed a mass in the posterior maxillary sinus, and 24 hours later, surgical exploration showed a Burkitt's lymphoma. The boy was under treatment 48 hours later with an aggressive chemotherapeutic regimen.

I wish I could say that this diagnosis could have been made in as timely a fashion without the use of the personal computer. I doubt it. I had never seen, nor do I expect to ever again see, this rather unusual presenting complaint. It was the only clue, the only abnormality, in an otherwise healthy adolescent boy, to an aggressive and rapidly proliferating mass in a clinically inaccessible area.

Many more anecdotal stories are appearing about how the computer is being used in the practice of medicine. Computers are also becoming a vital part of the accounting procedures necessary to post our accounts and pay our bills. They are at the heart of our science, through the use of the various databases and through compilation of large quantities of data necessary to ask the many pressing questions we are constantly facing in medicine. They process our words, check our spelling, and suggest alternative words through the electronic thesaurus. Just as air-

line companies in the thirties learned it was less expensive to use simulators than to crash aircraft in the training of pilots, medical educators are learning in the eighties that it may be less draining on our health and our national treasure to use computer simulators in the training of young doctors. Hospitals are investing huge quantities of increasingly scarce resources in sophisticated computer systems to handle the flow of accounting, clinical, and historical information that they must maintain.

"I wish I could say this diagnosis could have been made in as timely a fashion without the use of the personal computer. I doubt it."

The paperless medical office is becoming a reality in several clinics around the country. In these systems, there is no medical chart as we are accustomed to thinking of it. All information is recorded on a computer terminal in each office examining room. The clinical and historical data one would normally find on the chart is on the terminal and available for immediate access. Information on the nature of the visit, including a narrative summary, is recorded at the time of the visit by the doctor who sees the patient. In some respects, the pen is becoming just as obsolete as the chart.

Many groups now use computer bulletin board systems and message services on line with their computers to pass along information about their group or subjects of specific interest to them. Subspecialty and local medical societies may find this particularly useful. Electronic mail, where a letter is entered into a local computer terminal in Atlanta and sent from a post office in London or Seattle 30 minutes later as local mail, is now a reality, as is entry of telegrams or Mailgrams. One Atlanta bank and several large national banks allow payment of all bills and checks on personal checking accounts through the personal computer. Stock transactions, including buy, sell, option, and bond trading, are routinely entered from the keyboard without the interface or expense of a broker. Just as the world's medical literature is available from on-line databases, so are incredible quantities of information on a variety of other subjects.

I recently was required to construct a board of trustees for a small non-profit organization, a task for which I had neither training nor experience. Wanting to provide potential members of this board with explicit areas of responsibility and wanting a clearly structured understanding of the legal liabilities of such organizations, I dialed the Bibliographic Retrieval Service of W. B. Saunders Co. on my computer and was able to search back several years to get the complete text of an article appearing in the Harvard Business Review on the constitution and responsibilities of non-profit boards. *The New York Times, The Wall Street Journal, The Washington Post, The St. Louis Post Dispatch,* the Associated Press, United Press International, Reuter's News Services, and even the White House Press Office can be accessed immediately with no equipment more sophisticated than the personal computer and a modem. If information is the most valuable commodity in our culture, the personal computer is the most valuable tool in getting that commodity.

MAG's Committee on Computer Education has been addressing some of the major computer-related issues facing our membership, including database access for medical information, office accounting systems, and transfer of paperless insurance claims.

In this issue of the *Journal,* two articles appear describing different areas of computer applications. The wide variation in their subject matter subtly emphasizes the tremendous diversity of subjects that can be approached by these machines. In 1983, the MAG organized a Committee on Computer Education. This committee, with me as its chairman, has been addressing some of the major computer-related issues facing our membership, including database access for medical information, office accounting systems, and transfer of paperless insurance claims. The other physician members of this committee are Edward D. Biggerstaff, III, Savannah; Alan D. Clark, Alpharetta; Floyd P. Garrett, Atlanta; William M. Headley, Milledgeville; Richard C. Mattison, Atlanta; Jack F. Menendez, Macon; and James H. Sullivan, Columbus.

We invite your input and questions. The MAG will have in place in the near future several programs to help the membership in becoming more involved in the use of these machines. They have helped us to send out our bills. They are on the verge of helping us to become better doctors.

William M. McClatchey, M.D.
Internist & Rheumatologist, Atlanta

Reference

1. Massey EW, Moore J, Schold SC Jr. Mental neuropathy from systemic cancer. Neurol 1981;31(10):1277-81.

"Aging Is Becoming"

Independence for Older Georgians

Strong concerns about the quality of life of older Americans have surfaced many times over the years. Federal and state involvement with this issue began in 1935 with the enactment of the Social Security Act. Since that time, various national and state organizations that share the common goal of catering to the particular needs of older persons have been formed. By 1965, the increasing awareness of the needs of an enlarging segment of the population resulted in the passage of federal legislation called the Older Americans Act. This Act was designed to assist state and local agencies develop and deliver services and support to older Americans.



The current societal view of older persons is that they have little to offer to society. They are often regarded as being sickly, unproductive, poor, and totally dependent on family and society. This stigma, untrue in so many cases, has forced older persons to become wary and mistrusting.

Members of the MAG, however, are sensitive to the concerns of older people. We want to improve our relationship with our older patients by enhancing our role as a source of information and caring. It is for this reason that the MAG, together with the Department of Human Resources' Office of Aging, will present an awareness campaign in May entitled "Aging is Becoming." This campaign is part of the celebration of May as Older Americans Month.

The goal of "Aging is Becoming" is to promote the concept of independence for older Georgians. For physicians, this means stressing preventive health care to their older patients. The messages of this campaign will reach three target audiences: physicians, the general public, and older Georgians. To physicians, the messages will be that there are community resources and alternatives to nursing homes for older patients which should be looked into. To the general public, the messages will be that older persons are attractive, contributing members of society who want to remain independent and productive. Finally, to the older people, the messages they receive will say that preventive health care is important and that their physicians are excellent sources for information on this subject.

Campaign materials will promote the image of older Georgians as active, diverse, contributing members of society. Some of the campaign elements to be produced include:

1) An information kit for physicians containing referral lists of services for the elderly and their families; information on community care services; brochures and pamphlets with health tips for older patients; and other information.

2) Original TV and radio public service announcements featuring the song, "Aging is Becoming." The spots will portray older persons as active and alert.

3) Possible articles for publication featuring interviews with older persons and physicians on how to improve the relationship between the two groups.

Through MAG's efforts on "Aging is Becoming," we want to improve the trust older patients feel towards physicians and other members of society.

Edgar Woody, M.D.

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The Intervention Unit
Windy Hill Hospital
2540 Windy Hill Rd.
Marietta, Ga.
(404) 951-3130

Automatin

Step-By-Step Consideration Small Computer

Bob Brown and

THE SETTING in which you practice medicine is growing more complex day by day. You already know the problems of keeping up with the latest clinical advances. As if that weren't enough, there seems to be a never-ending stream of new regulatory and financial requirements.

At the same time, computing equipment is getting smaller, faster, cheaper, and more reliable. Computers capable of doing useful work are now within the financial reach of even small solo practices. Computers are also getting easier to use; your office staff won't have any trouble operating a small computer running good packaged software.

The new pressures on physicians and the ready availability of a tool which can relieve at least some of them may lead you to consider installing a computer in your medical practice. The benefits of automating portions of your practice are many. Computers are well suited to doing the tasks people consider drudgery. How much more could your office staff do if they didn't have to type statements?

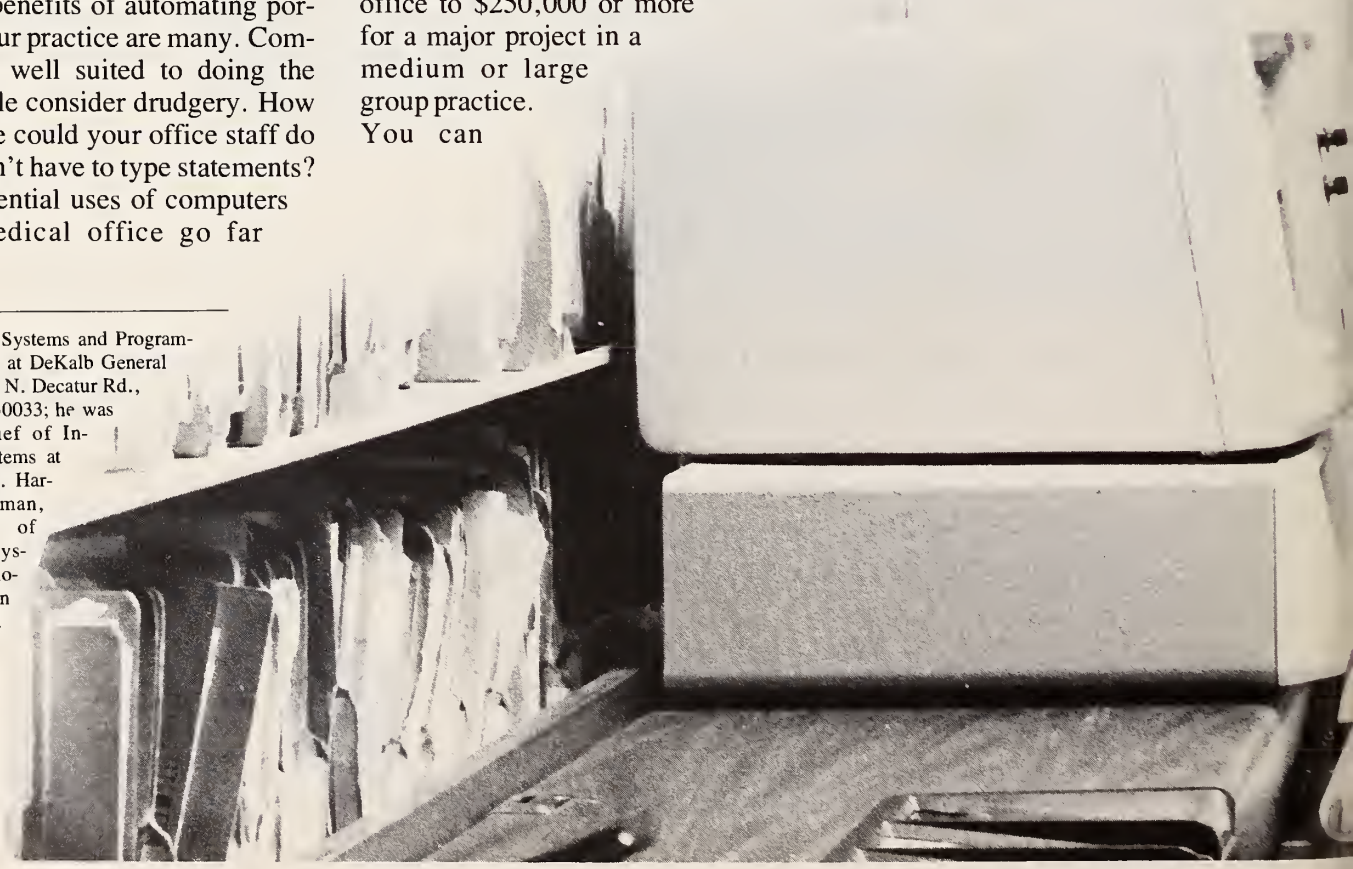
The potential uses of computers in the medical office go far beyond billing. A computer can help you keep track of who your patients are and when each one is next due for follow-up. It can file insurance claims and keep track of regulatory data. It can help you measure your revenue, broken down by practitioner, by procedure, and even by equipment used, so it can help you set your fees such that everything you do is profitable. Although most clinical uses of computers in the office setting are still in the research stage, computers can help you keep track of things like your patients' drug allergies and interactions.[1]

Getting these benefits requires getting a computer, and writing the check to the computer salesman is the simplest part of that chore. You should expect that installing a computer will cost from $10,000 to automate a few functions in a small office to $250,000 or more for a major project in a medium or large group practice. You can also expect such a project to take up to a year or even longer to complete. The decision to put a computer in your office is not one to be made lightly.

You'll save time, money, and worry if you plan your computer project in detail before you start. You can't overestimate the importance of careful planning. In the following pages, we'll try to help you decide what areas of your practice to automate and how to plan for that automation.

Make It a Business Decision

In deciding whether or not to get a computer, you should be sure to make it a business decision. Often, other moti-



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Your Practice

When Planning For a Your Office

b Harbort

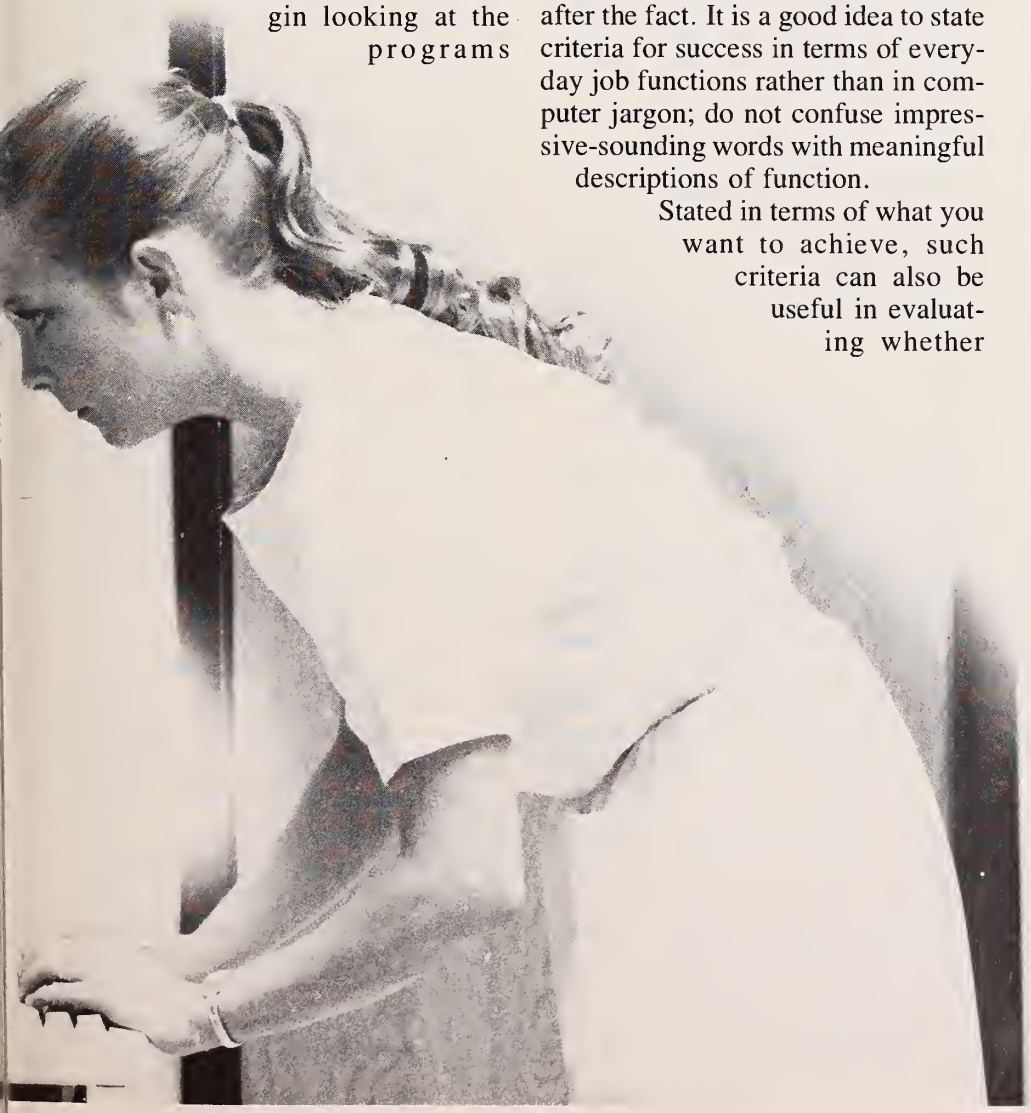
vating factors play an important part in making such a decision, and when this happens, it is a predictor of failure. Peer pressure factors frequently cannot be avoided, but you *can* avoid the trap of installing a computer "to learn about computers." This puts your practice at stake in a gamble you are not well trained to take, and it is a bad basis on which to make business decisions.

There is a lot of flashy hardware and software on the market today. To avoid being taken, you should firmly establish the objectives of any automation project before you begin looking at the programs and computers which might meet your needs. This will give you a yardstick for measuring proposed solutions. As we will see later, this must be an "iterative" process, but you can control it to your advantage.

If you set objectives before you start you can also define criteria for successful completion of a project. This will be of benefit to you as well as making it easier to deal with vendors of programs, computers, and support services. Criteria of this sort must be stated in objective, measurable form, and this must be done at the outset of a project; it *cannot* be done after the fact. It is a good idea to state criteria for success in terms of everyday job functions rather than in computer jargon; do not confuse impressive-sounding words with meaningful descriptions of function.

Stated in terms of what you want to achieve, such criteria can also be useful in evaluating whether or not to automate. These criteria can be modified later, as you learn more about the automation process, but initial criteria will give you a framework around which to organize your thinking.

Once you have decided to go ahead, proceed in a stepwise fashion. You should choose the area or areas to automate, select the set of computer programs that meets your needs, and then choose a computer system that will run the programs you have selected and has the capacity to handle your current and anticipated work load. These are the major steps we will discuss in the following sections.



Choosing Areas for Automation

There are four things to look for in choosing areas for automation — you should examine the nature of the task, the nature of the proposed automation, the amount of judgment required for the task, and the volume of work.[2]

Tasks to be automated should be well-defined, repetitive, and productive. Computers are machines which can follow instructions, but they cannot do anything else; they can't do what you mean instead of what you say. It is impossible to get a computer to complete satisfactorily an ill-defined task, not because the computer can't do what you tell it but because you can't describe the task in enough detail for the computer. *Never* decide to automate something because you believe the process of automation will help you to get better control of the task. A computer is a calculator, not a problem solver, and taking the approach of using an automation project to "straighten things out" in a department only

leaves you with two sets of problems to deal with instead of one. Never automate a mess. What you'll get is a fast mess — one that is even more out of control than before.

Tasks for automation also need to be repetitive in nature. One major advantage of the computer is that it can remember instructions and carry them out again at a command. The catch is that giving the computer the instructions the first time is difficult, time-consuming work. If you're only going to do something once, you may find it easier and less expensive to do it by hand. The same thing is true for tasks which may arise only intermittently — the effort to program the computer may never pay off unless quick results are of paramount importance. For these reasons, carefully evaluate tasks to see if they are done with enough frequency or urgency to warrant using a computer. Even if a task is performed frequently it may not be a candidate for automation if automating it will neither provide significant time saving to the worker nor capture data for processing in some other area. Some tasks are better performed manually.

Something often overlooked is the degree to which a task is productive in the overall framework of the organization. Just because a task can be automated doesn't mean that it is worth the investment in time and money that it takes to automate it. Make sure any task you decide to put on the computer is of importance to your organization, otherwise you will end up with a large investment in irrelevant systems.

Besides looking at the nature of the tasks you are considering automating, you should also look at the intended mechanism of automation. You need to make sure that automating a task saves work and doesn't create more work. This is true not only because it can affect the efficiency of your organization but also because it strongly affects worker acceptance of the new way of doing things. *To make automation succeed, it must provide those who use it with some direct benefit.* To do otherwise would be like telling your nurse that extra work done in charting, which is of no direct nursing benefit, will make life easier in the business office.[3]

The amount of judgment necessary to perform a task is an important criterion in deciding whether or not to automate it. Computers are good at well-defined tasks which do not require independent thought. They are not much good at making judgmental decisions because the factors that go into good decision making are often not well-defined. It is possible to design an automated system where the computer handles the rule-based items and asks for help from a human when judgment is required, but it is difficult to program a computer to know when to ask for help. This makes using such a program very time consuming and generally not cost-effective.

Buying Computer Hardware and Software

In dealing with computer vendors it is important to maintain your perspective as the buyer. Vendors will want to state specifications in technical terms; your written objectives should be in terms of your work. Having predefined objectives for a system provides a basis for meaningful discussions with vendors, stated in terms *you* can understand. It also is a way to tell vendors your expectations so they can evaluate whether or not they want your business. The main thing to remember is not to get caught up in computer jargon — your purpose is to accomplish a business or medical function, and you should stick to the objectives you have set for your project.

In evaluating potential suppliers of computer systems and programs, you should look at product cost, vendor stability, and the cost of responsive service on the product. Like most other equipment, computers should not be bought on the sole basis of lowest cost. Part of the cost of a system, be it hardware or software, is the cost of the design effort, and it is worth some extra cost to get a well-designed system. Another part of the cost is in the quality of the components; again, professional systems need to be made better and will cost more than systems for hobby or personal use. A third aspect of system cost is in the level of support which comes with the original system. This is like buying a camera at a local photo store instead of through a mail order service. Local stores charge more, but they're there to answer questions later on.

There is a tendency among those interested in computers to try to develop their own computer software systems. Don't do it if you can possibly avoid it.

You should also consider both vendor and manufacturer stability in making computer-related purchases. Vendor stability is important because the vendor is your first point of contact for help, expansion of system capabilities, or repair work. Manufacturer stability is important to guarantee a continued supply of spare parts, and also to make sure that your system has a growth path that can be used for expansion as your needs change.

There are several things to consider in regard to service for computer systems. The time criticality of the tasks you have automated is an important factor in determining the level of service necessary to meet your needs. Vendors should be evaluated on their ability to provide service at your location for high priority items, at a service depot for lower priority items, and through a mail-in service for items you can keep on hand for swapping. Costs for various types of service should be examined in light of your need to provide system availability.

When you have narrowed your choice of vendors to one or a few, ask for references, then check them by calling your colleagues who have already bought. By capitalizing on the experience of your peers, you can confirm your judgment or possibly avoid a costly mistake. Use your written objectives to ask specific questions, for only by asking specific questions will you get the answers you need to determine how well a program or piece of equipment will fit into your practice. Check references

if you decide to hire a consultant, too. Not everyone who holds himself out as a "computer expert" is qualified to help you and even employing a large firm does not guarantee ability and integrity in those who give you advice.

Select the Software

There is a tendency among those interested in computers to try to develop their own computer software systems. *Don't do it* if you can possibly avoid it. Even if you know how to program a computer, you are a physician, not a software engineer. Making a number of programs work as a cohesive system is much more complex than writing a single program. Remember, "learning about computers" is not a valid criterion for automating a business function. Trade journals are full of horror stories with headlines like "Law Firm Develops Own System, Nearly Sinks."[4] If you want to understand computers better, ask your 10-year-old to explain them to you.

Whenever possible, use existing software. This may seem restrictive until you stop to realize you are probably not the first person to want to automate a particular task. In fact, if it is a task that meets the criteria we set out above, it is likely that others have seen the opportunity and automated it already. What we are suggesting is that you will have to have some very specialized requirements not to be able to find a system *almost* like you want. Developing your own custom-made system will be worth it only if you have either immutable special requirements or a very large volume of work.

We mentioned earlier that setting up objectives for automating a task is an "iterative" process; here's where the iteration comes in. In surveying the available software in your area of interest, you will almost certainly discover features you hadn't thought about wanting or needing. This is not to say that you should conduct such a survey without first establishing objectives. On the contrary, having your objectives in hand makes conducting such a survey easier and more productive. But you should be willing to learn from the process of seeing how others have approached the problem you are trying to solve.

After conducting the survey, re-examine your requirements in light of available software. From this process, you should be able to make a list of "required" and "desired" features and a ranking of importance of each feature in terms of a cost/benefit ratio. You may not be able to quantify the costs and benefits of each feature in dollars, but you must consider them nevertheless. This will give you a new set of "intermediate" criteria on which to base another, more detailed look at the available systems.

Now is also the time to plan your manual backup procedures. There is no doubt that any system you install will fail at some time or another, and you had better be prepared for it.[1] You should be prepared for estimating downtime, manually doing the work that cannot wait, holding in an orderly fashion the work that can wait, and bringing the system back into full operation when it has been repaired. The software you choose must have provisions for these functions, and you must make sure that the computer system cannot wreck your practice by an occasional failure.

You'll save time, money, and worry if you plan your computer project in detail before you start.

You are now ready to do an objective evaluation of the available software. You should devise a scoring system that enables you to rank the relative importance of all the features of the software and their "goodness of fit" into your organization. Don't forget to rank vendor stability and service record as well. We suggest a two step process, with a preliminary checklist used to make a first cut, followed by a more detailed evaluation of the finalists.

Choose Hardware That Runs the Selected Software

Most vendors of software will recommend particular hardware to suit best the needs of their software. The problems begin when you want to use a single computer system to run many different programs. At this point, you must try to find hardware that matches the needs of all the systems you want (or will want) to run.

A major concern here is that of "hardware compatibility" claims on the part of some vendors. Equipment manufacturers may compromise between offering significant enhancements and making their machines compatible with the industry leaders. There are many vendors of equipment who live up to their claims, but the safe thing to do is to see the software in question actually run on the proposed hardware before you pay for it.

Another consideration that users of small systems often overlook is that of getting *commercial grade hardware*. One of the differences in cost of systems for home or hobbyist use and systems for office use is that the quality of the equipment is significantly better in the latter. The rating of the power supplies is typically better, components are of higher quality, and often the electrical contacts in internal wiring are gold-plated to resist corrosion. The overall effect of this is equipment that can survive being in constant use for long periods of time. The extra initial cost of commercial-grade hardware will generally be offset by savings of time and money resulting from higher reliability.

Consider the hardware in planning for system failure. You need to evaluate the service and support available in light of your plans for manual backup; you need to see how difficult it might be to build some hardware redundancy into your system for critical components; you need to consider the speed of hardware in allowing for processing backlogs of data due to system failures.

You must also consider the volume of work you expect your system to do before you make a final choice on hardware. All but the smallest computers will be powerful enough to do the work you want done — the bottlenecks happen in the "peripheral" equipment, such as disk storage and printers. You need to make sure that the disk storage subsystem has enough capacity to handle all the data you will need access to. Any computer salesman worth his salt will point out that one disk drive can handle any amount of data, you just have to

change disks. Well, watch out. A single "340 kilobyte" diskette (one that can store up to 340,000 characters of data) can hold only about 160 half-page EKG reports. If you don't want to have to hire a file clerk to work for the computer, make sure you get enough storage so the computer can get to a useful amount of data with little or no human intervention.

You need to consider in a similar fashion the data handling capabilities of such devices as terminals and printers. For example, if you plan to provide a receptionist with a terminal for looking up files and scheduling appointments, make sure it is fast enough to do the job without appreciable delay. If you are expecting to print statements, make sure the "characters per second" rating of the printer will allow you to get the job done in a reasonable amount of time.

Before you buy hardware, you also need to consider support for expanding your system. If you have planned properly for increased load, your system will have some room to grow in its original areas of application. However, the very fact of installing an automated information processing system will change your perception of how your office functions, and this will lead you to consider new and different areas of application. You should plan for this to happen, and plan for its occurrence in a shorter time than you expect. Buying computer equipment with power enough to handle new work is one way of minimizing the cost of future expansion. You may also want to consider "distributed processing" systems, where the work is done on a number of small computers connected together. This latter approach has the advantage that incremental cost to increase processing power is less; its major disadvantage is that the systems are significantly more complex. Whatever method you choose, be sure to plan for expansion.

Management Considerations

The discussion presented above is different from others you may have read in a couple of ways. First, those who sell hardware or software may be tempted to start from the wrong end in describing the system specification process. They'll concentrate on what their systems do rather than on what you need. Second, there are better ways that physicians can learn about computers than by gambling their practices on learning well and quickly.

The key issue here is getting *you,* the physician, to manage the process of automation like you would any other aspect of your practice. Management-level involvement does not require vast technical expertise and detailed knowledge of every facet of a job, it requires being able to see the "big picture" and providing leadership to make things go smoothly in project implementation.[2]

As you read this section, remember that your job in an automation project is to manage. Management is a *people oriented* job much more than it is a technical one. Many automation projects have failed because it was easier and more fun to get intimately involved in the technical aspects than it was to do the management work required to do things right. Don't be fooled into pointing at expensive equipment and claiming its progress; if your automation project doesn't make your office more productive as a medical practice, it isn't doing its job. *Be involved with the people problems every step of the way.*

In evaluating potential suppliers of computer systems and programs, you should look at product cost, vendor stability, and the level and cost of responsive service on the product.

Beware of "freezing" current problems in an automated system. Installing a computer is an expensive and time-consuming task. Once the investment in money and time has been made, it is difficult to change things. If the area you are planning to automate has problems before you start, be sure you solve them rather than automating them. Once again — never automate a mess; you will only get a fast mess, not a usable system.

You should also beware of trying to combine the solving of procedural problems in an area with the process of designing and installing an automated system. The complexities of doing both things at once can lead to failure. The best approach is to solve the procedural problems *before* you start the conversion; besides being simpler, it gives you the opportunity to learn the nature of the process you will be automating.

There are four things to look for in choosing areas for automation . . .

Notice that this discussion is not technically oriented but is aimed at the "people" and "procedural" problem areas. This is because automation has a profound effect on the people it touches. At the very least, automating a function will change the way the worker does things. It may also change the kinds of things a worker does. The point is that people generally don't like change, either in job routine or in basic job function. One of the most important things you can do is to pay attention to how your employees are reacting to the automation of their workplace. Skill in guiding a project is necessary, and you must remember that a successful system is intended to fit nicely in its environment rather than be imposed upon it. You, your staff, and your practice form the environment — make sure you run the system rather than vice versa.

One way you can foster staff acceptance of the changes your staff will be facing is to involve them in defining, setting up, and implementing the system. You can, for instance, delegate much of the survey and evaluation work outlined above. This gives the staff a positive opportunity to increase their knowledge, to better their job skills, and to become familiar with the range of options for automation in their areas of expertise. This will increase your staff's accept-

ance of the system in a couple of ways: It makes the process of changing their jobs into a positive thing that is of benefit to them as well as to you, and it gives them a sense of ownership in the system they will be using. This sense of ownership is especially valuable because it creates loyalty to the process they have helped design, and it allows them to state criticisms in constructive terms rather than in negative or damaging ones. This can improve morale during a stressful period of change.

Allow enough time. Frederick Brooks, project manager for one of the largest software development projects ever, has said that "more software projects have gone awry for lack of calendar time than for all other causes combined."[5] This is particularly true of small, first projects, because small projects frequently are only informally specified and because people doing their first project have no basis for estimating the time necessary to complete the work. You *must* leave time for "Murphy's Laws" to run their course. Plan your development schedule pessimistically, and you can only be pleasantly surprised when you finish ahead of time; plan as if everything will work right the first time, and you're in for some rough times.

Confidentiality and Security

The confidentiality of medical data has as its basis the patient's right to privacy. When a patient confides in his physician, he does so in the belief that his confidences will be respected. The physician's office staff should be subject to the same constraints as exist between patient and physician, but sometimes there is a lax attitude about such things. This, coupled with the tendency to try to apply technological solutions to social problems, has led to complaints that automated systems undermine the privacy of patients. This is not necessarily the case. It is, however, a real issue, and it must be dealt with from the start of an automation project.

The idea that records in an automated system are not as well protected as manual records is false. Automated systems are actually easier to protect than equivalent manual systems. Records stored in automated systems are compact, physically easier to protect, and readable only with relatively sophisticated equipment.[6] Computers are not the problem. Alan Westin, in his book *Privacy and Freedom,* points out that the real problem lies in "*unclear policy definition* which pertains equally to manual systems."[7]

A policy for your office ought to include consideration of:[8]

- *confidentiality* — the status accorded to information which requires that it be protected from unauthorized use or disclosure.
- *data integrity* — the state existing when data agree with the source from which they derive and have not been accidentally or maliciously disclosed, altered, or destroyed.
- *data security* — the protection of data from accidental or intentional but unauthorized disclosure, modification, or destruction.

Physicians have an important leadership role in developing and implementing policies in this area, and you should remember that one of the most effective forms of leadership is by example: Your employees will tend to treat confidential and sensitive data in much the same way they perceive that you treat it, so set a good example both personally and in the way you design your systems.

Tasks to be automated should be well defined, repetitive, and productive . . . never automate a mess.

Avoid being overly concerned about areas which are unlikely to affect systems in a medical office environment. Unless you have extremely valuable or sensitive data, by far the greatest danger of loss or destruction is from error rather than malice. This is an area where it is easy to slip into the habit of trying to apply technological solutions to your problems rather than doing the work necessary to keep them from happening. The greatest effort to protect data

Should You Hire a Consultant?

Computer consultants are available to help you with the evaluation, selection, and implementation of an automated system. You need not hire a consultant to do the whole job, either. You can, for example, hire a consultant to help with the evaluation, then do the selection and implementation yourself.

Whether you hire a consultant and how much of the work you delegate to him or her depends on four things:

- How much of your own time you are willing to devote,
- Your computer experience,
- The capability of your staff,
- Your budget.

The more of your own time you are willing to spend on a project, the less you will need outside help. Similarly, if you have extensive experience with computing and data processing, you will need less help than if your exposure to computers has been limited to laboratory systems and hobby-type microcomputers.

Don't underestimate how much your staff can help in an automation project, nor the value of letting them help. Not only can you delegate much of the routine work, your staff members will often have insights into the operation of your practice which you yourself do not.

Consider also how much you can afford to spend on consulting. Good consultants don't come cheap: $250 per day is the minimum you should expect to pay, and fees of $750 or more are not uncommon. In deciding how much you can afford, don't lose sight of the fact that your own time and that of your staff are also worth money, and don't forget that an investment in consulting services can serve to protect your investment in hardware and software by increasing the chances of success.

There are many things consultants can do to help you with evaluation, selection, and implementation. Remember, though, that they can only *help* you; they can't provide the leadership in change that your staff will require. These things you must do yourself if you want your project to succeed.

in your system should be directed toward preventing errors and minimizing their consequences. Good system development and operating practices, *consistently applied,* are of immeasurable help in this regard.

One thing which is often overlooked during system installation is that systems under development should be kept separate from those in routine use. It is not uncommon to find sites where the two are mixed on a regular basis. This can be particularly bad when the two systems handle data in different ways; if you subsequently want to do computations on this data, you may not be able to because of inconsistencies in how it is recorded. Good procedures, not high tech gadgets, are the answer to this problem. You should maintain written documentation of all changes to your systems (automated and manual). This documentation should describe the nature of the change, the reason for the change, the method of implementation, and the anticipated effects. For systems of the size you're likely to be dealing with, a "jot book" like the ones kept at nursing stations is an effective way of dealing with this data.

Don't be fooled into pointing at expensive equipment and claiming its progress; if your automation project doesn't make your office more productive as a medical practice, it isn't doing its job.

Much of the literature on protection of data concerns itself with physical security, but we feel that it is the least important factor in the protection of most medical data. While the potential for harm in the event of improper disclosure of medical data is large, the value of the data (in terms of dollars) to unauthorized persons is usually small. Thus, a minimal set of impediments to the unauthorized acquisition of data will generally be sufficient.[9]

One area of physical security you *cannot* ignore is the requirement for backup copies of programs and data. You are planning to trust your clinical and financial records to a relatively delicate medium; fortunately, the medium is also compact and easy to copy. You will need a set of backup copies in your office to protect against human error and equipment failure. Another set at another location serves as a defense against malicious destruction of data and against a disaster such as fire in your office. These offsite backup copies don't need elaborate security; just taking them home is probably enough. Be sure the computing hardware you select has adequate provision for making backup copies. For the volume of data likely in a medical office, cartridge tape or disk is probably a better backup medium than flexible disks because of the number of flexible disks which would be required.

If you take a few precautions and if you continuously motivate your employees to be security-conscious and procedurally conservative, then the chances of deliberate intrusion or unintentional error will be small.

Managing Change

Having a computer is likely to change the way you perceive your work. This, coupled with the fact that the environment of your practice will tend to change over time, means that you had better plan for change. It is possible to do this if it is given some attention during system development. You can even plan to some extent for things that you cannot anticipate. If your system is successful, it will be used. If it is used, it will exist in an environment of change. Unforseen contingencies will not go away on their own; neither will they necessarily wreck your system. The key is to do enough planning to be in control, rather than being forced to react to changes.[2]

The management of a computer project does not end when the system is "up and running" to your satisfaction. It is necessary to conduct periodic reviews of the system to guarantee continued smooth operation and to spot potential problems before they get out of hand. Because you and your staff will be involved with the day-to-day use of the system, you may find it hard to focus on the "big picture" — current details may interfere and take on undue weight. The way around this is to keep records of all aspects of system development and activity, just as you would if conducting a clinical trial of a new drug or therapy.

Use the records as you would the records of a clinical trial. They can help you evaluate the way to manage your system utilization and decide when it's time to make changes. The major areas you need to record are system activity — how much work the system is doing, system performance — how often the system fails and must be repaired, and system exceptions — a detailed report of each time you or your staff finds something the system cannot handle. Your records do not need to be fancy; a "jot book" kept with the equipment will be sufficient.

You must *leave time for "Murphy's Laws" to run their course. Plan your development schedule pessimistically and you can only be pleasantly surprised when you finish ahead of time. . .*

Record system activity in a way that will allow you to project the workload the system will be expected to perform. This is necessary to manage growth in an orderly fashion and to plan for new hardware acquisitions in a realistic time frame.

Maintain a detailed log of system performance so that you can spot patterns in the problems you may be having. This should include both hardware failures and program "crashes" — anything that causes the system to

fail. This is both an aid in pinpointing problem areas that need attention and an aid in dealing with vendors.

By logging occurrence of exceptions to the rules established for system operation you can get a good idea of the areas which might need to be addressed in system changes. Not all exceptions are bad; if exceptions of a given type are infrequent, they are best handled manually. On the other hand, if a significant amount of staff time is taken up in dealing with a certain type of exception, perhaps a modification of the current system's rules is in order.

If you don't want to hire a file clerk to work for the computer, make sure you get enough storage so the computer can get to a useful amount of data with little or no human intervention.

Conclusion

The low cost and wide availability of computer systems make it attractive to consider putting one in your practice. Automation of some areas has the potential for enhancing a medical practice by making the work more manageable. Just remember, you don't get something for nothing. The price you pay for a successful computer system installation is not so much in money as in the careful planning and management that you must provide.

Extra Advantages

There are a few of extra features you will be able to get almost free as part of a project to automate a medical office. These are communications, word processing, and spreadsheet analysis. Programs to perform these functions are available for almost all small computers at prices in the $500 or less range.

A word processing program uses your computer to store, arrange, and print words, sentences, and paragraphs. You can use it as a sophisticated typewriter if you like. It will also be useful for preparing follow-up letters to patients, consultation reports, and almost any kind of work that requires production of many documents, each almost (but not quite) like the others.

To use a communications program, you'll need not only the program, but a piece of equipment (a modem, or modulator/demodulator) which connects your computer to a telephone line. With these, you will be able to tap into specialized medical data bases operated by GTE and the AMA, the Library of Congress, and others. You will also be able to use the various "computer utilities" such as CompuServ and The Source to look up such information as airline schedules and to send and receive electronic mail. (All the timesharing services charge a fee for use, and most of them charge a fee for establishing an account, too.)

Spreadsheet programs such as VisiCalc and Multiplan set up the screen of your computer to look like an accountant's worksheet. Each "cell" of the worksheet can contain a description, a number, or a formula. The formulas can refer to numbers in other cells. Changing one number causes all the others which depend on it to be recomputed. Not only can you use a spreadsheet program for things like budgets and taxes, you can use them to get answers to "what if" kinds of questions which might be very difficult to calculate manually. For example, if you put your current fee information by service into a spreadsheet along with the number of patients who receive each type of service, you can easily calculate the effect of lowering some fees and raising others. Similarly, you can find out the effect of discontinuing certain services and estimate the effect of adding new ones.

Programs in the few-hundred-dollar price range can be a significant asset to your practice, but software so inexpensive generally works mostly in isolation from the rest of your system. If you need to make one of these programs an integral part of your system, expect to spend more money and time.

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AFTER BREAKTHROUGH BLEEDING AND AMENORRHEA,
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NORLESTRIN®
(1 mg norethindrone acetate and 50 mcg ethinyl estradiol tablets, USP) 1/50
BECAUSE SOMETIMES A 50 IS PREFERABLE.
See next page for brief summary of prescribing information.

Brief Summary of Prescribing Information
NORLESTRIN® (norethindrone acetate and ethinyl estradiol tablets, USP)

See section under **Special Notes on Administration and HOW SUPPLIED.**
Before prescribing, please see full prescribing information. A Brief Summary follows.

DESCRIPTION
Norlestrin Products are progestogen-estrogen combinations.

INDICATIONS AND USAGE
Norlestrin Products are indicated for the prevention of pregnancy in women who elect to use oral contraceptives as a method of contraception.

In clinical trials with Norlestrin 1/50 involving 25,983 therapy cycles, there was a pregnancy rate of 0.05 per 100 woman-years; in clinical trials with Norlestrin 2.5/50 involving 96,388 cycles, there was a pregnancy rate of 0.22 per 100 woman-years.

Dose-Related Risk of Thromboembolism from Oral Contraceptives: Studies have shown a positive association between the dose of estrogens in oral contraceptives and the risk of thromboembolism. It is prudent and in keeping with good principles of therapeutics to minimize exposure to estrogen. The oral contraceptive prescribed for any given patient should be that product which contains the least amount of estrogen that is compatible with an acceptable pregnancy rate and patient acceptance.

CONTRAINDICATIONS
1. Thrombophlebitis or thromboembolic disorders
2. A past history of deep-vein thrombophlebitis or thromboembolic disorders
3. Cerebral vascular or coronary artery disease
4. Known or suspected carcinoma of the breast
5. Known or suspected estrogen-dependent neoplasia
6. Undiagnosed abnormal genital bleeding
7. Known or suspected pregnancy (See WARNING No. 5)
8. Benign or malignant liver tumor which developed during the use of oral contraceptives or other estrogen-containing products.

WARNINGS

Cigarette smoking increases the risk of serious cardiovascular side effects from oral contraceptive use. The risk increases with age and with heavy smoking (15 or more cigarettes per day) and is quite marked in women over 35 years of age. Women who use oral contraceptives should be strongly advised not to smoke.

The use of oral contraceptives is associated with increased risk of several serious conditions including thromboembolism, stroke, myocardial infarction, hepatic adenoma, gallbladder disease, and hypertension. Practitioners prescribing oral contraceptives should be familiar with the following information relating to these risks.

1. *Thromboembolic Disorders and Other Vascular Problems.* An increased risk of thromboembolic and thrombotic disease associated with the use of oral contraceptives is well-established. Studies have demonstrated an increased risk of fatal and nonfatal venous thromboembolism and stroke, both hemorrhagic and thrombotic.

Cerebrovascular Disorders: In a collaborative study in women with and without predisposing causes, it was estimated that the risk of hemorrhagic stroke was 2.0 times greater in users than nonusers, and the risk of thrombotic stroke was 4.0 to 9.5 times greater.

Myocardial Infarction: An increased risk of myocardial infarction associated with oral contraceptives has been reported confirming a previously suspected association. These studies found that the greater the number of underlying risk factors (cigarette smoking, hypertension, hypercholesterolemia, obesity, diabetes, history of preeclamptic toxemia) for coronary artery disease, the higher the risk of developing myocardial infarction, regardless of whether the patient was an oral contraceptive user or not. Oral contraceptives, however, were found to be a clear additional risk factor.

It has been estimated that users who do not smoke (smoking is considered a major predisposing condition to myocardial infarction) are about twice as likely to have a fatal myocardial infarction as nonusers who do not smoke. Oral contraceptive users who are smokers have about a fivefold increased risk of fatal infarction compared to users who do not smoke, but about a tenfold to twelvefold increased risk compared to nonusers who do not smoke. The amount of smoking is also an important factor.

Risk of Dose: In an analysis of data, British investigators concluded that the risk of thromboembolism, including coronary thrombosis, is directly related to the dose of estrogen used in oral contraceptives; however, the quantity of estrogen may not be the sole factor involved.

Persistence of Risk: Two studies have suggested that an increased risk may persist for as long as 6 years after discontinuation of oral contraceptive use for cerebrovascular disease and 9 years for myocardial infarction. In addition, a prospective study suggested the persistence of risk for subarachnoid hemorrhage.

Estimate of Excess Mortality from Circulatory Diseases: The risk of diseases of the circulatory system is concentrated in older women, in those with a long duration of use, and in cigarette smokers.

A study of available data from a variety of sources concluded that the mortality associated with all methods of birth control is low and below that associated with childbirth, with the exception of oral contraceptives in women over 40 who smoke.

The risk of thromboembolic and thrombotic diseases associated with oral contraceptives increases with age after approximately age 30 and, for myocardial infarction, is further increased by hypertension, hypercholesterolemia, obesity, diabetes, or history of preeclamptic toxemia, and especially by cigarette smoking.

The physician and the patient should be alert to the earliest manifestations of thromboembolic and thrombotic disorders. Should any occur or be suspected, the drug should be discontinued immediately.

A fourfold to sixfold increased risk of postsurgery thromboembolic complications has been reported in users. If feasible, oral contraceptives should be discontinued at least four weeks before surgery of a type associated with an increased risk of thromboembolism or prolonged immobilization.

2. *Ocular Lesions.* Neuro-ocular lesions, such as optic neuritis or retinal thrombosis, have been associated with the use of oral contraceptives. Discontinue the oral contraceptive if there is unexplained sudden or gradual, partial, or complete loss of vision; onset of proptosis or diplopia; papilledema; or retinal vascular lesions.

3. *Carcinoma.* Long-term continuous administration of estrogen in certain animal species increases the frequency of carcinoma of the breast, cervix, vagina, and liver.

In humans, an increased risk of endometrial carcinoma associated with the prolonged use of exogenous estrogen in postmenopausal women has been reported. However, there is no evidence suggesting increased risk of endometrial cancer in users of conventional combination or progestogen-only oral contraceptives.

Studies found no evidence of increase in breast cancer in women taking oral contraceptives; however, an excess risk in users with documented benign breast disease was reported.

There is no confirmed evidence of an increased risk of cancer associated with oral contraceptives. Close clinical surveillance of users is, nevertheless, essential. In cases of undiagnosed persistent or recurrent abnormal vaginal bleeding, appropriate diagnostic measures should be taken to rule out malignancy. Women with a strong family history of breast cancer, or who have breast nodules, fibrocystic disease, or abnormal mammograms, should be monitored with particular care.

4. *Hepatic Tumors.* Benign hepatic adenomas have been found to be associated with oral contraceptives. Because hepatic adenomas may rupture and may cause death through intra-abdominal hemorrhage, they should be considered in women presenting abdominal pain and tenderness, abdominal mass, or shock.

A few cases of hepatocellular carcinoma have been reported in women taking oral contraceptives. The relationship of these drugs to this type of malignancy is not known at this time.

5. *Usage in or Immediately Preceding Pregnancy; Birth Defects in Offspring, and Malignancy in Female Offspring.* During early pregnancy, female sex hormones may seriously damage the offspring.

An increased risk of congenital anomalies, including heart defects and limb defects, has been reported with the use of oral contraceptives in pregnancy.

There is some evidence that triploidy and possible other types of polyploidy are increased among abortuses from women who become pregnant soon after ceasing oral contraceptives.

Pregnancy should be ruled out before continuing an oral contraceptive in any patient who has missed two consecutive menstrual periods. If the patient has not adhered to the schedule, the possibility of pregnancy should be considered at the time of the first missed period, and oral contraceptives should be withheld until pregnancy has been ruled out. If pregnancy is confirmed, the patient should be apprised of the potential risks to the fetus and the advisability of continuation of the pregnancy should be discussed.

Women who discontinue oral contraceptives with the intent of becoming pregnant should use an alternate form of contraception for a period of time before attempting to conceive.

Administration of progestogen-only or progestogen-estrogen combinations to induce withdrawal bleeding should not be used as a test of pregnancy.

6. *Gallbladder Disease.* Studies report an increased risk of surgically confirmed gallbladder disease in users of oral contraceptives.

7. *Carbohydrate and Lipid Metabolic Effects.* Because decreased glucose tolerance has been observed in a significant percentage of patients, prediabetic and diabetic patients should be carefully observed while receiving oral contraceptives.

An increase in triglycerides and total phospholipids has been observed.

8. *Elevated Blood Pressure.* An increase in blood pressure has been reported in patients receiving oral contraceptives. The prevalence in users increases with longer exposure. Age is also strongly correlated with development of hypertension. Women who previously have had hypertension during pregnancy may be more likely to develop elevation of blood pressure.

9. *Headache.* Onset or exacerbation of migraine or development of headache of a new pattern which is recurrent, persistent, or severe, requires discontinuation of oral contraceptives.

10. *Bleeding Irregularities.* Breakthrough bleeding, spotting, and amenorrhea are frequent reasons for patients discontinuing oral contraceptives. In breakthrough bleeding, nonfunctional causes should be borne in mind. In undiagnosed abnormal bleeding from the vagina, adequate diagnostic measures are indicated to rule out pregnancy or malignancy.

Women with a past history of oligomenorrhea or secondary amenorrhea, or young women without regular cycles should be advised that they may have a tendency to remain anovulatory or to become amenorrheic after discontinuation of oral contraceptives.

11. *Ectopic Pregnancy.* Ectopic as well as intrauterine pregnancy may occur in contraceptive failures.

12. *Breast-Feeding.* Oral contraceptives may interfere with lactation. Furthermore, a small fraction of the hormonal agents in oral contraceptives has been identified in the milk of mothers receiving these drugs.

PRECAUTIONS
1. A complete medical and family history should be taken prior to the initiation of oral contraceptives. The pretreatment and periodic physical examinations should include special reference to blood pressure, breasts, abdomen, and pelvic organs, including Papanicolaou smear and relevant laboratory tests. As a general rule, oral contraceptives should not be prescribed for longer than one year without another examination.
2. Preexisting uterine leiomyomata may increase in size.
3. Patients with a history of psychic depression should be carefully observed and the drug discontinued if depression recurs to a serious degree.
4. Oral contraceptives may cause fluid retention and should be prescribed with caution, and only with careful monitoring, in patients with conditions which might be aggravated.
5. Patients with a past history of jaundice during pregnancy have an increased risk of recurrence of jaundice. If jaundice develops, the medication should be discontinued.
6. Steroid hormones may be poorly metabolized and should be administered with caution in patients with impaired liver function.
7. Users may have disturbances in normal tryptophan metabolism, which may result in a relative pyridoxine deficiency.
8. Serum folate levels may be depressed.
9. The pathologist should be advised of oral contraceptive therapy when relevant specimens are submitted.
10. Certain endocrine and liver function tests and blood components may be affected (a) Increased sulfobromophthalein retention. (b) Increased prothrombin and factors VII, VIII, IX, and X; decreased antithrombin 3; increased norepinephrine-induced platelet aggregability. (c) Increased thyroid-binding globulin (TBG) leading to increased circulating total thyroid hormone. (d) Decreased pregnanediol excretion. (e) Reduced response to metyrapone test.

Drug Interactions: Reduced efficacy and increased incidence of breakthrough bleeding have been associated with concomitant use of rifampin. A similar association has been suggested with barbiturates, phenylbutazone, phenytoin sodium, tetracycline, and ampicillin.

ADVERSE REACTIONS
An increased risk of the following serious adverse reactions has been associated with oral contraceptives: thrombophlebitis; pulmonary embolism; coronary thrombosis, cerebral thrombosis; cerebral hemorrhage; hypertension; gallbladder disease; benign hepatomas; congenital anomalies.

There is evidence of an association between the following conditions and the use of oral contraceptives, although additional confirmatory studies are needed: mesenteric thrombosis, neuro-ocular lesions, eg, retinal thrombosis and optic neuritis.

The following adverse reactions have been reported in patients receiving oral contraceptives and are believed to be drug related: nausea and/or vomiting, usually the most common adverse reactions, occur in approximately 10% or less of patients during the first cycle. Other reactions, as a general rule, are seen much less frequently or only occasionally: gastrointestinal symptoms; breakthrough bleeding; spotting; change in menstrual flow; dysmenorrhea, amenorrhea during and after treatment; temporary infertility after discontinuance of treatment; edema; chloasma or melasma; breast changes; change in weight; change in cervical erosion and cervical secretion; possible diminution in lactation when given immediately postpartum; cholestatic jaundice; migraine; increase in size of uterine leiomyomata; rash (allergic); mental depression; reduced tolerance to carbohydrates; vaginal candidiasis; change in corneal curvature; intolerance to contact lenses.

The following adverse reactions have been reported and the association has been neither confirmed nor refuted: premenstrual-like syndrome; cataracts; changes in libido; chorea; changes in appetite; cystitis-like syndrome; headache; nervousness; dizziness; hirsutism; loss of scalp hair; erythema multiforme; erythema nodosum; hemorrhagic eruption; vaginitis; porphyria.

Special Notes on Administration
Menstruation usually begins two or three days, but may begin as late as the fourth or fifth day, after discontinuing medication.

After several months on treatment, bleeding may be reduced to a point of virtual absence; reduced flow may be a result of medication and not indicative of pregnancy.

HOW SUPPLIED
Norlestrin 21 1/50 is available in compacts each containing 21 tablets. Each tablet contains 1 mg of norethindrone acetate and 50 mcg of ethinyl estradiol. Available in packages of five compacts and packages of five refills.

Norlestrin 21 2.5/50 is available in compacts each containing 21 tablets. Each tablet contains 2.5 mg of norethindrone acetate and 50 mcg of ethinyl estradiol. Available in packages of five compacts and packages of five refills.

Norlestrin Fe 1/50 is available in compacts each containing 21 yellow tablets and 7 brown tablets. Each yellow tablet contains 1 mg of norethindrone acetate and 50 mcg of ethinyl estradiol. Each brown tablet contains 75 mg of ferrous fumarate, USP. Available in packages of five compacts and packages of five refills.

Norlestrin FE 2.5/50 is available in compacts each containing 21 pink tablets and 7 brown tablets. Each pink tablet contains 2.5 mg of norethindrone acetate and 50 mcg of ethinyl estradiol. Each brown tablet contains 75 mg of ferrous fumarate, USP. Available in packages of five compacts and packages of five refills.

Norlestrin 28 1/50 is available in compacts each containing 21 yellow tablets and 7 white inert tablets. Each yellow tablet contains 1 mg of norethindrone acetate and 50 mcg of ethinyl estradiol. Available in packages of five compacts and packages of five refills.

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Trophoblastic Tumors

O. Eduardo Talledo, M.D., and Paul F. Talledo

TROPHOBLASTIC TUMORS encompass the categories of trophoblastic disease described by James Ewing in 1910: hydatidiform mole, chorioadenoma destruens, and choriocarcinoma.[1] They represent the spectrum of a group termed "gestational trophoblastic neoplasia" (GTN). Before 1956, choriocarcinoma was uniformly fatal. Following the report by Li and co-workers in 1956[2] on the successful use of folic acid antagonists at the National Institutes of Health, trophoblastic tumors have become one of the most treatable and curable solid tumors by chemotherapy today.

The categories of trophoblastic disease described are hydatidiform mole, chorioadenoma destruens, and choriocarcinoma.

Hydatidiform Mole

The incidence of hydatidiform mole is reported as 1/2000-2500 pregnancies in the USA. At Talmadge Memorial Hospital, it is about 1/1000. The incidence increases in Southeast Asia and the Orient to 1/75-80 pregnancies and seems to be highest below age 20 and above 40 among populations of low socioeconomic status and malnutrition.

Hertig and Edmonds[3] suggested that the underlying cause was a pathologic ova (blighted). Fluid taken up from the intervillous spaces accumulates in the stroma of the villi, which fail to develop circulation, giving rise to mole formation. Park,[4] on the other hand, believes that the primary defect resides in the trophoblast which cannot support the normal development of the ovum. The embryo either reabsorbs or spontaneously aborts; the ovum becomes blighted with the subsequent formation of the characteristic molar gestation.

Four categories of molar pregnancy are recognized:

1. The complete hydatidiform mole in which all villi are swollen with very few or absent capillaries and no fetal RBCs. The trophoblastic proliferation is marked; there is an absence of embryo, cord, and amnion. The karyotype is predominantly 46XX.
2. The incomplete or partial hydatidiform mole in which there are some villi, capillaries, and fetal RBCs. There is some proliferation of the trophoblast and the presence of an abnormal fetus. The karyotype is predominantly triploid.
3. The transitional mole has some villi; capillaries are present; the proliferation of the trophoblast is normal or hypoplastic. There is an amnion and stunted embryo. The titers are usually low, and the karyotype is trisomic or triploid.
4. The partial or complete hydatidiform mole concomitant with a separate pregnancy.

Table I shows the distribution of our patients. Genetically,[5, 6] two varieties of moles have been established: one which usually has a polyploid karyotype (partial, transitional) and the other a 46XX karyotype (complete mole). Further studies have pointed to the androgenicity of complete moles.[7] This clinical division is useful in that choriocarcinoma destruens and chorioepithelioma are rare in association with partial and transitional moles; the opposite being true for complete moles. Histologic grading has been attempted but to date does not seem to have a practical application.[8]

Eighty percent of molar gestations will completely resolve after evacuation. The remainder will persist as either chorioadenoma destruens (15%) or choriocarcinoma (3%). Our experience (Table II) is somewhat different in that one third of our patients with molar pregnancy persisted as chorioade-

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Table I - Molar Categories MCG (1957-1983)

Hydatidiform Mole* (complete)	28
Transitional and incomplete	4
Partial Mole	1
Total	33

* One subsequent to clomid stimulation and artificial insemination

MCG (1957-1983) Table II - Gestational Trophoblastic Neoplasia

	Number	Dead	Alive
Hydatidiform Mole	33	—	33
Chorioadenoma Destruens	11	—	11
Choriocarcinoma	21	9	12
Total	65	9	56

noma destruens and one third of the patients in the total series had choriocarcinoma. This is probably without significance since we are a tertiary center and, consequently, our material will be skewed to those patients with persistent disease.

After a molar pregnancy, the risk for a second molar gestation increases 4-5 times. From available reports, it would appear that patients with repeated molar pregnancies have an increased incidence of trophoblastic sequelae and fewer normal pregnancies. Only one patient in our series falls in this category — a 23-year-old woman who had four gestations; the first two normal; the other two molar. Patients with single molar gestations do not appear to have any compromise in fertility and stillbirth; prematurity and congential abnormalities are not found to be increased. Patients treated with chemotherapy seem to have some increase in spontaneous abortion and placenta accreta, but their pregnancies are otherwise normal.

Out of 22 patients with molar pregnancies and chorioadenoma destruens we followed, 16 became pregnant and delivered normal children; pregnancy losses did not occur. In the 12 surviving patients with choriocarcinoma, four had hysterectomy and one had a pituitary stalk resection. Of the remaining six with potential for conception, two were lost to follow-up, two got pregnant (one aborted and one had two normal children) one was treated recently, and one is on contraceptive medication by choice.

Of the 11 patients with chorioadenoma destruens, all responded to chemotherapy and recovered. A summary of the nine who died of choriocarcinoma is presented in Table III. The most common sites of metastases, as pointed out in the literature in decreasing order, were lung, vagina, brain, liver, kidneys, small intestine, and spleen. Bone metastases are rare.

Following hydatidiform mole by specific measurement of the beta subunit,[9] most moles will have a normal level by 10-13 weeks. With the older, less sensitive methods, levels of HCG became negative in about 8 weeks. There is a direct relationship between the amount of trophoblastic tissue and the levels of HCG in blood or urine. To produce one milliunit per ml, it is necessary to have 10^5 cells; therefore, when HCG has just become undetectable, the patient may still have a tumor burden equal to or less than 10^5 viable cells. Approximately 50% of patients who fail to have a normal chorionic gonadotropin titer within 10-13 weeks following a molar pregnancy will have persistent trophoblastic disease, either chorioadenoma destruens or choriocarcinoma and, consequently, treatment is recommended. Goldstein[10] has identified a group of patients who are likely to have persistent trophoblastic disease and proposed the use of prophylactic chemotherapy. In our series, prophylactic chemotherapy was used in six patients, and only one developed non-metastatic trophoblastic disease which responded to subsequent additional chemotherapy. This is in accordance with Goldstein's experience of absence of metastatic disease when prophylactic chemotherapy is utilized.

Patients with persistent trophoblastic disease fall into two categories: metastatic and non-metastatic. The metastatic trophoblastic disease can be further sub-divided into good and poor prognosis groups.[11] Patients in the latter category are those with metastases to brain and/or liver; duration of disease longer than 4 months from the termination of the antecedent pregnancy; initial titers greater than 100,000 IU per 24 hours of urine collection or serum beta subunit HCG titer greater than 40,000 mU/ml; metastatic disease resistent to previous single agent chemotherapy; or choriocarcinoma developing after a normal term gestation.

As can be seen in our clinical summary of patients who died of choriocarcinoma, three died a few days following admission; the other six had at least one or two of the criteria for poor prognosis.

Table III — Clinical Summary of Patients Who Died of Choriocarcinoma

Year	*Age*	*Parity*	*Antecedent Pregnancy*	*Remarks*
1. 1958	21	G-1, P-1	Mole	Died on day of admission. Had D&C and TAH by referring physician.
2. 1959	15	G-1, P-0	Mole	Had right SO* 10 weeks PTA for intra-abdominal bleeding. Required several BTs after admission. Was re-explored for bleeding. Died 6 days PO.
3. 1961	23	G-4, P-2 Ab-1	Mole	Had 2 courses of MTX 3 weeks apart and 1 course of Velban, MTX,* Thio TEPA. Did not respond. Died of generalized disease. HCG 10^6 IU/L.
4. 1961	16	G-1, P-0	Mole	Died 4 days after admission of generalized disease.
5. 1965	22	G-5, P-5		Had chest lesions during her last full-term pregnancy interpreted as sarcoidosis. Referred from Medical Service because of vaginal lesion. Single agent (MTX*) and combination (MTX, Leukeran) given 3 weeks apart. Died of generalized disease 4 months later. HCG 10^6 IU/L.
6. 1966	27	G-5, P-4		Abortion 3 months, PTA.* HCG 245,000 IU/L. Triple chemotherapy (MTX, ACT,* Leukeran). TAH* & SO. Died of widespread metastases.
7. 1973	21	G-1, P-1	Stillborn	Admitted 3 weeks PP.* Died of generalized disease following 1 course of MTX.
8. 1977	20	G-1, P-0	Mole	Admitted 1 year post mole. Brain metastases. XRT. Initially responded to single dose triple agent chemotherapy. Recurred after titers had been negative. Failed to respond to triple agent (CTX, MTX, ACT). TAH & bilateral SO. Received Bagshawe and Einhorn's protocol and high dose MTX (250 mg/K, 500 mg/K, 1 gm/K) with CV rescue. Died of widespread metastases 4 years after beginning CT.
9. 1982	23	G-3, P-3		Full-term gestation 2 years PTS. Admitted for GI bleeding. Had respiratory arrest. HCG 360,000 mIU/ml. Had liver and brain metastases. Died few days after admission.

* TAH: Total Abdominal Hysterectomy; PTA: Prior to Admission; MTX: Methotrexate; ACT: Actinomycin D; CTX: Cytoxan; PP: Post Partum; SO: Salpingo-oophorectomy

Our experience is in accordance with others in that early diagnosis and prompt therapy are the single most important factors in determining a high success rate in the treatment of these tumors.

Summary

Sixty-five patients with trophoblastic disease were admitted to Talmadge Hospital between 1957 and 1983. Approximately half of the patients (33) had hydatidiform mole. One third had choriocarcinoma, and one fifth chorioadenoma destruens. Analysis of the clinical data is in agreement with literature reports regarding early diagnosis and prompt treatment as most important if a high success rate is to be achieved. With chemotherapy, as presently used, the cure rate should provide figures in excess of 95%.

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MAG's Computerized Staging of Chemical Dependence

Karl V. Gallegos, M.D., Merrill A. Norton, R.PH., G. Douglas Talbott, M.D

Introduction

In January, 1984, the Board of Directors of the Medical Association of Georgia approved the use of its computer to study the MAG's Impaired Physicians Program. The Board of Directors of M.A.G. Mutual, Inc., gave a grant to initiate the research process in February. Since that time, the task of developing the nation's first impaired physicians data base has evolved into a mechanism that will provide important educational information about chemical dependence. Early information obtained from the study has shown that the computer may become an indispensable tool in the evaluation, treatment, and aftercare follow-up of the impaired physician.

Methods

Although it would be wonderful to say "with the computer we will find the central physical, chemical, and biologic principles that underlie chemical dependence, including its natural history," it is unlikely that such a goal could be accomplished in this decade. The first major obstacle to overcome is developing nomenclature that is measurable and adequately describes the course of the disease. Currently, many of the definitions and terms used for the diagnosis and classification of drug and alcohol related problems are vague. The terms are relatively inflexible and are not universally accepted, nor do they adequately describe this dynamic process which exists in degrees of severity in the same individual at different times. The most important primary goal of the retrospective study is to begin to develop workable, measurable terms that are versatile and acceptable to members of the treatment team.

Early information obtained from the study has shown that the computer may become an indispensable tool in the evaluation, treatment, and aftercare follow-up of the impaired physician.

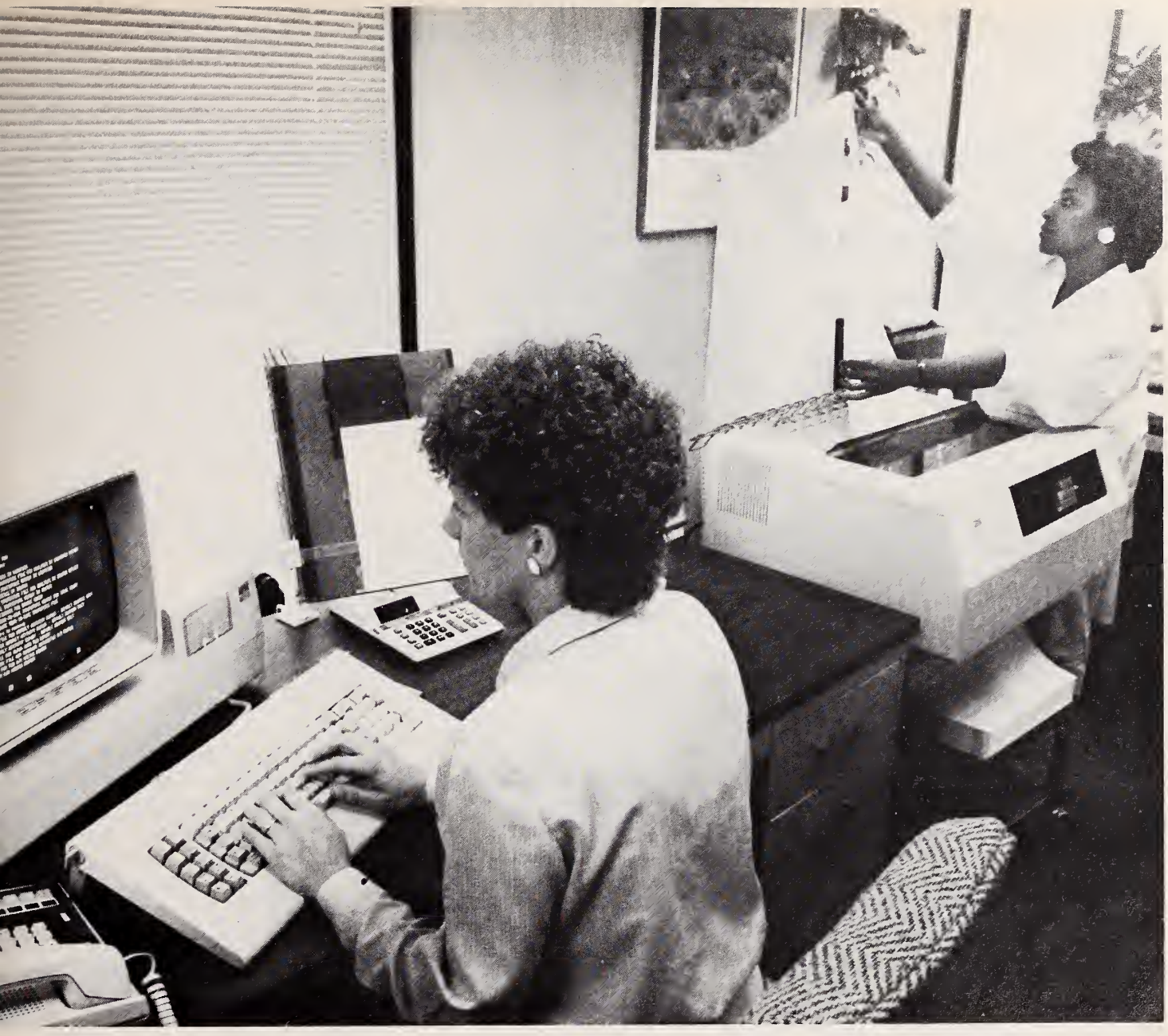
Such terms could be used to pinpoint or designate with precision the state of individuals during the course of their disease, to estimate their risk of death or residual impairment, and to assess their chance for recovery with the appropriate treatment. The adoption of uniform terms based on observable data can contribute greatly to the field with regard to increased competency among professionals in the more familiar skills of listening, observing, interviewing, and communicating effectively.

The process of creating clinical, operational definitions has already begun. In order to make sound probabilistic judgments about the patient, relevant information must be obtained, and the validity of this information assessed. Such a process requires a large data base. Other prerequisites include: 1) scaled documentation of current diagnostic criteria for assessing patients; 2) categorizing patients into groups on the basis of similarities (matching); 3) accounting for treatment dropouts and treatment failures; 4) long-term follow-up of patients; and 5) the development of multi-dimensional measures of treatment outcome. Ultimately, it will be important to know changes of each outcome measure with time, within the context of the patient's personality, and the impact of these dynamics on the recovery-relapse process.

Some unique aspects of the impaired physician population and the treatment model allow the data base as it exists to fulfill the above requirements. These salient features warrant special mention: First, the population is relatively homogeneous in terms of sociocultural and economic characteristics and intelligence. Second, all patients prior to admission into the program undergo an evaluation process that includes substance abuse history, psychiatric assessment, complete medical examination with diagnostic laboratory tests, family and social history and psychologic testing. Third, only those physicians with measured signs of psychologic and physical dependence to alcohol and/or drugs are admitted for treatment.

Evidence to gauge the extent to which substance abuse has affected patients' interpersonal relationships, their sense of self-worth and their professional lives is obtained from the admission interview. The reliability of these data is established by in-

Dr. Gallegos is Director and Mr. Norton is Associate Director of the Data and Statistics Division of MAG's Impaired Physicians Program. Dr. Talbott is the Founder and Medical Director of the Impaired Physicians Program. This research was funded by a grant from MAG Mutual Insurance Co., Inc., and the Medical Association of Georgia. Send reprint requests to Dr. Gallegos at 938 Peachtree St., Atlanta, GA 30309.



formation obtained from family members and colleagues. Finally, patterns of substance abuse, route of administration, dose, frequency, names of drugs used, and how these drugs were obtained are also studied. The minimum amount of information that can be gleaned from the investigation of this information would include a better understanding of the addiction and abuse potential of many drugs that are currently used for the treatment of patients by the medical profession.

The chemically dependent physician inadvertently has performed on himself "natural" experiments using relatively dangerous substances. Had a researcher tried to design an experiment to test the abuse potential of the drugs used by the physician-patient population, such an investigation, no matter how brilliant the research study design, no matter how important the outcome, would never have been approved by ethics or human rights committees according to current standards.

Information gleaned from the investigation would include a better understanding of the addiction and abuse potential of many drugs that are currently used for the treatment of patients by the medical profession.

One of the major complicating factors seen in all epidemiologic studies that have attempted to relate the outcome to dose and frequency of use or exposure is that an adequate measure of true exposure, or even "guesstimates" of it, has not been obtained. However, such is not the case with the medical population. Physicians know their drugs. Impaired physicians almost always give very detailed histories about their substance abuse. Most other chemically dependent pa-

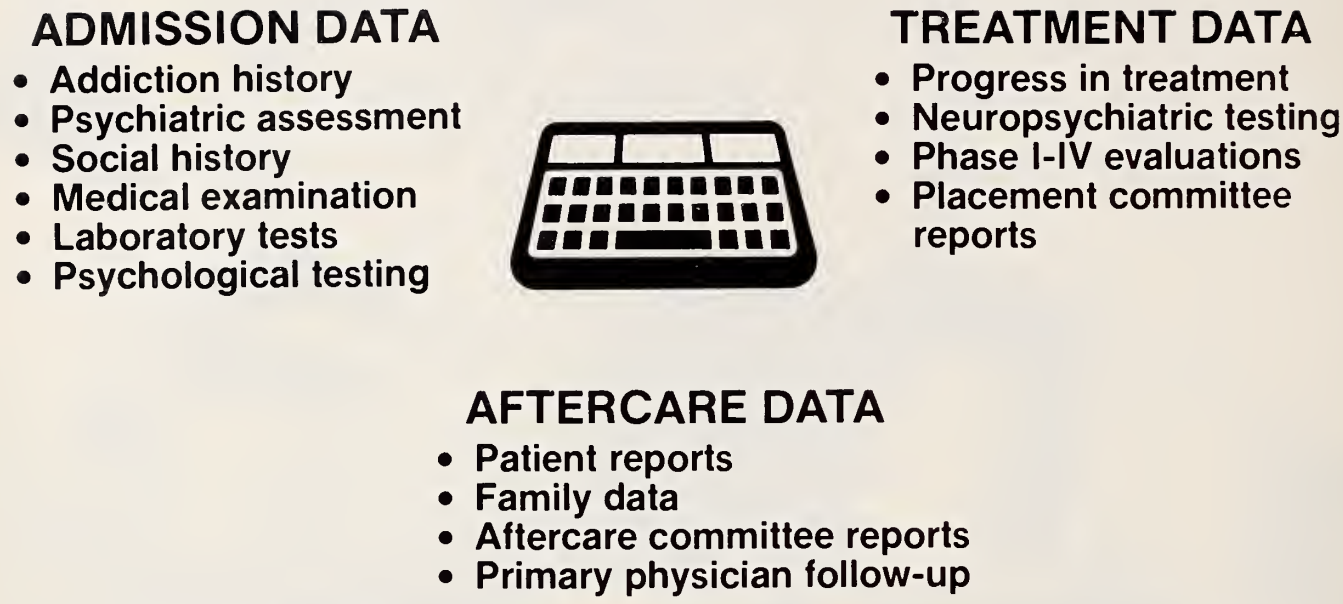


Figure 1 — The data base includes variables from information obtained at the start of treatment, data about the patient's progress in treatment, and information about the post-treatment status of each patient.

tients cannot. Close examination of dose-effect relationships of drug use will unleash new perspectives on brain behavior, personality, and the development of stressful life situations related to drug abuse. Other clues will appear that will guide future laboratory research with respect to the enkaphalin-endorphin system, the biogenic amines, any genetic study and more. This work will take our best minds, those not afraid of large numbers, computers, and long questionnaires. Although the question appears enormously complex, the answer may be quite simple.

The Data Base

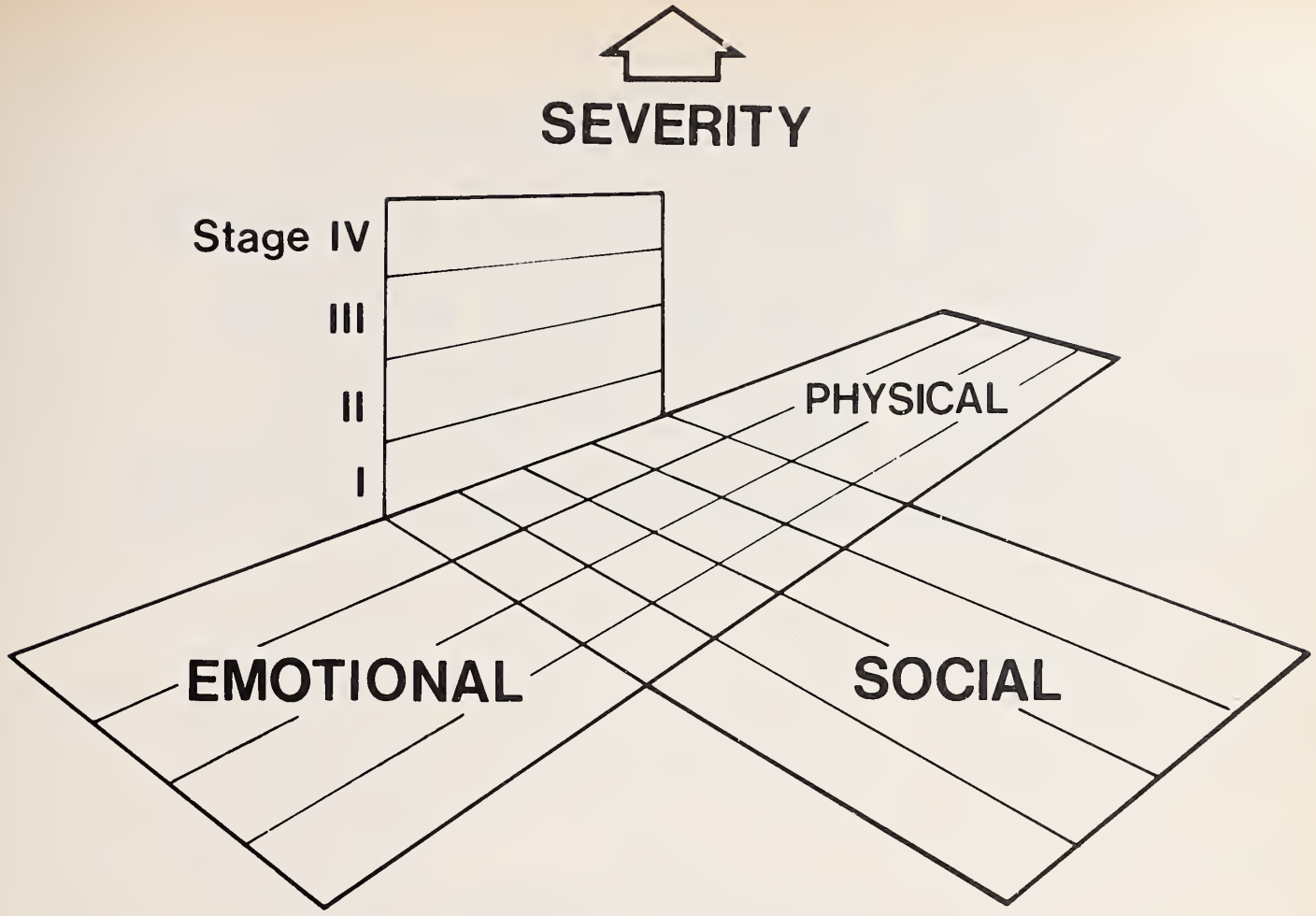
Over 200 variables related to chemical dependence and physicians are being studied. Many of these variables have been chosen because we need to examine them more clearly to define chemical dependence and risk factors (genetic, social, professional, and pharmacologic) of interest (Figure 1). Other variables are under consideration because they help us more clearly understand clinically associated addictive behaviors such as bulimia-anorexia, cigarette smoking, inappropriate risk taking, etc. A large part of the data base is used to measure emotional, physical, and psychologic well being of the patient at the time of admission. Serial measures throughout the recovery process are planned.

Currently, the data base is broad and ambitious. Its primary purpose is to allow future hypothesis formation, in order to know more about various risk factors, their temporal sequence and consistency, their strength of association, the biologic gradient, the specificity of effect, collateral evidence, and biologic plausibility. Through exhaustive investigation of the data base, information about a number of confounding variables which have served to keep the disease of chemical dependence a mystery will emerge. Thus, this relentlessly devastating disease, which, in persons under 65 years of age, causes directly and indirectly more morbidity and mortality than all other diseases combined[1] will be better understood and accepted. In the future, tests of clinical significance for prognosis and the choice of various therapeutic modalities can be made.

Staging the Disease of Chemical Dependence

As the data base is studied, knowledge about the present state of diagnosis and classification will become more clearly defined. Gaps or specific deficiencies in the existing diagnostic and classification systems will emerge. Coordinated, collaborative research with other state medical societies which have Impaired Physician Programs can begin. At that time, a primary objective would be to develop those types of study design and mechanisms of coordinated collaborative research that will allow staging of the disease of chemical dependence. The measurement of illness severity is required to evaluate the diagnostic efficiency of physicians, assess quality of care, understand utilization of health services, and reimburse hospitals on the basis of output.[2]

Staging is the major new challenge of future research in chemical dependence which will facilitate early recognition, individualized treatment designed to fit the diagnosis, and the stratification of the diagnosis to reflect meaningfully the prognosis of each patient. An epidemiologic approach to answers can emerge, and we can ask, "Which physician-patients will do well?, Who are the patients most at risk for relapse?" Ultimately, new prevention strategies can be devised and tested.



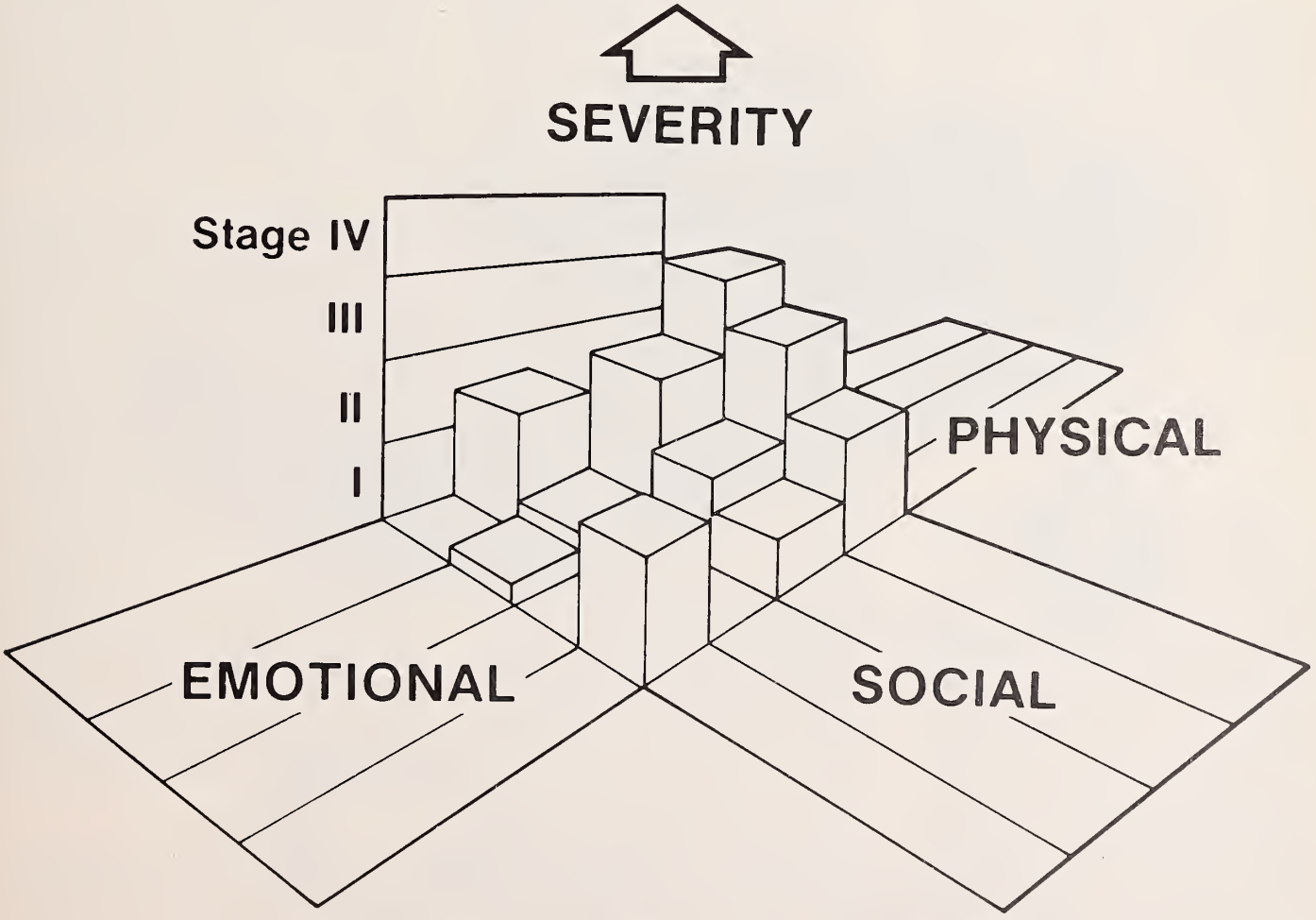


Figure 2 — The top figure represents the three domains — physical, social, and emotional — affected by the disease of chemical dependence. Statistical analysis of data will allow us to know more about the interrelationship of variables within each domain and to stage the disease in terms of severity.

Early research from the Division of Data and Statistics for the Impaired Physicians Program is encouraging, as evidenced by the 10-year review by Talbott, et al in the November, 1984, special issue of the *Journal*. There is evidence that a preliminary staging of the disease may be available by 1986 to provide a health risk appraisal for patients undergoing evaluation of chemical dependence. The software for the staging typology will reflect premorbid vulnerabilities of the patient and the extent of personal and social losses acquired as a result of the illness experience. Factored into the equation is the analysis of types of drugs used, patterns of substance abuse, the routes of administration, and associated medical disabilities. The diagnostic vector will also be comprised of the psychometric and neuropsychologic scores and the qualitative psychiatric assessment.

Currently, many of the definitions and terms used for the diagnosis and classification of drug and alcohol related problems are vague.

Chemical dependence affects the individual physically, socially, and emotionally. Each of these three domains is divided into smaller parts (Figure 2) which represent several variables. Each variable is measured and contributes to the statistical analytic score of the patient obtained from the 72-hour evaluation. The statistically generated score will reflect a stage from which a specific diagnosis can be computed. The diagnosis will reflect the progress. A computerized treatment plan and evaluation report will be generated graphically for the patient to review with his or her physician at the end of the evaluation.

The Computer and Software System

Currently, the VAX 11/750 is being used to process and store vast amounts of information. Statistical analysis and file management are being performed using the Statistical Analysis Software and the Scientific Information Retrieval software. Other software needs of the Division of Data and Statistics have been developed by the division to support, process, and quickly retrieve generated data. Graphics needed to interpret the results of statistical tests are currently being developed at the Emory University Computer Center whose programing consultants have donated large amounts of time for this purpose. Utmost care has been taken in the study design to provide maximum confidentiality of patients. A specialized code was devised to insure security within the system.

Conclusions

The Medical Association of Georgia has made a major commitment to the treatment of chemically dependent physicians. As the result of this investment, a large amount of information about the disease, its treatment, and the results of this treatment process in this population are available for study. The business of developing the data base has been facilitated by M.A.G. Mutual, the AMA, and The Division of Vocational Rehabilitation of the State of Georgia. Information from the study is currently being used to develop state and national education and prevention programs to be used not only to teach physicians, but also all persons working in the field and those with the disease of chemical dependence.

One major goal of the study is to begin to stage the disease in terms of severity. Through a staging process, more can be learned about the natural history of the disease. Cost benefit and cost effectiveness analyses and resource allocation can be made more realistically. Staging will make possible a computerized patient assessment system that will aid the physician specializing in chemical dependence to select the best treatment plan for each patient. The course of the traditional recovery-relapse process will be altered.

In the treated impaired physician population, data reveal that stressful life events combined with chemical dependence influence pathoplastically (a term which describes the "plastic" nature of the brain) the expression of symptoms of mental illness. We have found that once the drugs have been taken away, the individual can, over time, begin to recover and to function normally in his or her premorbid setting. We also have found that there appears to be a newly emerging pattern of excessive prevalence of intravenous use of drugs in a younger group of individuals. Almost all of these most frequently abused drugs were once advertised as being nonhabit forming, yet they appear to be many times more potently addicting than their precursors.

Data which will be published later, reveal that the death rate in physicians who relapse is greater than twenty-five per thousand per year. Most of these deaths are from suicide, overdose, or trauma related to substance abuse. The younger physicians appear to be most at risk. The Centers for Disease Control estimates show that alcohol and drugs are directly or indirectly responsible for most of the years of potential life loss in the general population.[1] This hypothesis has been supported for physicians by our findings.

The authors estimate the total cost of treatment and lost time from work as a result of chemical dependence in physician-patients is well in excess of $28,000,000. This estimate is based on the 1984 costs and the current value of the U.S. dollar. Unrecoverable losses difficult or impossible to estimate include permanent injury to health as a result of substance abuse, the destruction of relationships and the family.

The disease of chemical dependence affects directly or indirectly one out of every three Americans. Yet it is the most untreated treatable disease. Hope will come from new research using computers as a tool to delineate and assess the various stages of this disease.

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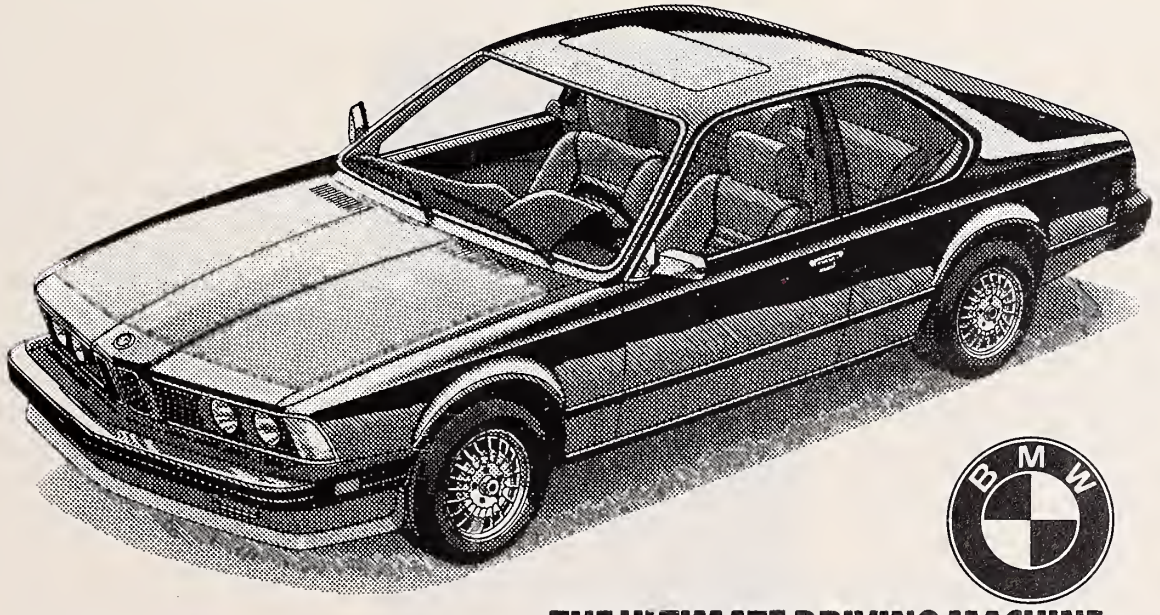
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America's March to Medical Mediocrity

or

A Great and Noble Profession is Dying

by E. Henry Lamkin, Jr., M.D.

This keynote address at MAG's Third Annual Leadership Conference held last February is insightful in its assessment and interpretation of the current state of medical politics. Dr. Lamkin gives us an understanding of why health care costs have escalated in simple, logical terms, and offers some practical solutions.

During my 16 years in the Indiana General Assembly, I was frequently asked to speak to various medically related groups on the subject of "an insider's view of how we look to government," or "what government is planning to do to medicine." But now that I have been out of government for 4 years, I am, unfortunately, in much the same position as Will Rogers — all I know is what I read in the newspapers. For instance, I noticed a November 1, 1983, article in the *Indianapolis Star* in which testimony by an insurance company before a Legislative Study Committee called for, "Drastic steps to bring rising hospital costs under control," and proposed a new, prospective finance system which was to be put in a place within 3 years. Interestingly, just a couple of pages later in the same paper, there was an article calling for increased accessibility to health care for the elderly — without mentioning the cost.



The next day, November 2, the *Indianapolis Star* carried another article stating that the American people were "bursting with the best health in history." On Sunday, November 13, The First Lady of the land was reported to have offered the services of Air Force One to bring Asian children with congenital heart disease back to the United States for surgery. Just a few months prior to that, the President of the United States personally intervened in a phone call to a hospital administrator in Minneapolis to encourage efforts to provide a liver transplant for a youngster who was in danger of dying without one.

One might ask, "What's wrong with the President of the United States? Doesn't he realize that transplantation is expensive surgery? And that the care of an individual with a transplanted organ — particularly a liver in a small child — can be a prolonged and expensive undertaking?"

Obviously, I'm being a little facetious, but I think these comments illustrate the schizophrenia which

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confronts the whole question of health care and health care finance in our country today.

It is frequently noted that health care in 1982 consumed 10.5% of the gross national product, up from 6% in 1965. And this seems to be an alarm, calling people to action to eliminate any further increase. Since transportation happens to be another interest of mine, I would point out that transportation currently takes 25% of the gross national product — but I hear no hue and cry to reduce the money spent for transportation.

I think these comments illustrate the schizophrenia which confronts the whole question of health care and health care finance in our country today.

While we are on the subject of transportation, perhaps we ought to push that comparison a little farther. Basing one's argument on the change in gross national product spent for a service implies that the product is the same now as it was in some previous year, such as 1965, that we are simply paying a great deal more for the same goods or services. Let's consider what might have followed if similar things had happened to transportation as happened to medicine. Let's pretend that a decision was made in 1965 by the Congress that every American family would be allotted one airplane and one car for each member of the family, and that government would subsidize all or at least a significant part of the cost of the planes and cars. Furthermore, let's assume that the driving age was decreased from 16 to 12. All of these would have a major impact on the percent of our gross national product which would be spent for transportation over the following years. This would be both direct and indirect: we would need more streets, more airports, more police officials, more lights, more regulating and licensing bodies, and more would be spent on property damage and personal injury associated with traffic accidents. This is not a perfect example, but I think this gives you an idea.

The fact is that health care is not the same product now that it was 20 years ago. How has health care changed? Well, let's take an example that I noted on a recent television news broadcast in Indianapolis. First, there was a discussion of the implantation of an artificial heart in Mr. Schroeder in the southern part of our state. The price of one artificial heart is in the range of $200,000. The first operation was performed over a year ago, the second was performed this fall, and now we are looking for the third and perhaps the fourth — a rapid rise in this part of the gross national product. On the same program, it was announced that a new cancer detection technique had been discovered which, by analyzing chromosomes, would allow us to identify people at greater risk for certain forms of malignancy — obviously, a more expensive procedure than the simple blood count, or sedimentation rate, or whatever else one currently employs with only limited usefulness.

Still later in that broadcast, our medical school announced approval by the FDA of an implantable hearing device which will allow people who previously were deaf to hear again — not as you and I hear, but certainly well enough to participate in our society. The cost for the device is $12,000. The price for correcting the hearing of the 200,000 people in our country who are considered deaf would come to 2.4 billion dollars. The costs of these procedures show up on the health care balance sheet, but the benefits do not. The benefits include the ability to keep people alive, to put them back to work, to keep them out of hospitals to support their families and to participate more fully in our society. In the case of the deaf, it would also mean closing a number of special schools for those students, and so forth.

There's been a lot of change in health care since 1965. Before 1965, there was no Medicare or Medicaid. There was no minimal wage law in our hospitals, no high quality contrast studies were available like the CAT Scan and NMR. We had no monoclonal antibodies for diagnosis and therapy. There were no intensive care units, and coronary care units were just being opened. Measles and polio vaccines were in their infancy. Most of our most effective antihypertensives, cardiac drugs, and antibiotics were yet to become available. Home monitoring, insulin pumps, and DNA-produced-human insulin had not yet revolutionized the care of diabetes. We even did not have some of the diseases that we have today: such as Legionnaires disease, Toxic Shock Syndrome, and AIDS. Coronary bypass surgery, coronary angioplasty, and fiberoptic endoscopy were not yet available. Hemodialysis became available in 1966, and in 1973 the Federal Government decided to subsidize hemodialysis for patients with chronic renal failure. Today we spend nearly $2 billion of our federal money keeping those people alive. We could certainly cut the federal budget by $2 billion if we would withdraw the subsidy; within a matter of a few days, that much of the problem would be resolved.

Changes in life patterns, less cigarettes and alcohol, etc, have the potential of a greater impact on health and life expectancies than changes in our health care delivery system.

Sure it costs more today than it did in 1965, but we get a lot more for our money. And it will continue to cost more as we make further progress against cancer, heart disease, stroke, the degenerative diseases of age and the congenital defects of the young.

So how do we deal with this situation? First of all, I think it is important that we understand how we came to where we are today. How did the current climate develop? What exactly is

going on today and what should be our response? How did we come to a climate where a Lou Harris poll suggests that 75% of Americans are "willing to accept a remarkable range of cost containment programs"; where an article in the *Wall Street Journal* suggests that advertising and price wars among hospitals and physicians are "growing contagious" and where "hospitals and doctors are competing" with one another and among themselves "with rising bitterness"; a climate where a speaker at the Indiana Hospital Association suggests that physicians and hospitals may be placed in the position of denying treatment to patients simply because they cannot afford to pay for it themselves or make difficult ethical decisions about who should and should not receive treatment; a climate in which an article in *Forbes Magazine* has suggested the possibility of "a rash of hospital bankruptcies and not a few unemployed doctors."

Today we spend nearly $2 billion of federal money keeping hemodialysis patients alive.

First, I would like to suggest that today's situation is the natural outgrowth of trends occurring during the second quarter of this century which are manifestations of a society that increasingly set for itself the goal of perfect personal material and physical well being. Our prayers had become not strength *for* adversity, but freedom *from* adversity. It has always been man's goal to strive for a better life; and science and industry had made great strides in that direction. But the successes of the past begat the expectations of today; and in the political sphere these become the demands of tomorrow. Because material and physical well being are so inextricably linked, it is not surprising that health care became as much a goal as a chicken in every pot.

The problem was made worse by our successes. It has been said that medical care really made no difference to morbity and mortality until the twenties and certainly the great explosion in well being occurred in the forties after the discovery of antibiotics. In this century, the great killers of history — bubonic plague, smallpox, diphtheria, typhoid, and typhus have been, or are nearly, eliminated. Tuberculosis persists, but its incidence has decreased and its treatment has become easier and generally more effective. Polio, whose annual epidemics scared and scarred millions, is now a rare disease — and measles and hepatitis B appear headed in the same direction.

We were successful, but as we were successful, people have wanted more — and it has become increasingly difficult for our profession to satisfy them. The growing affluence of American society has increased nutrition and housing for most people, with the decline in the illnesses aggravated by their absence. But the increasing affluence has also increased the availability of automobiles and the number of the sedentary obese — each with their concomitant medical risks. Our past successes have allowed many more citizens to survive into old age with its associated long-term, debilitating, and expensive, degenerative illnesses. And many of our current medical problems relate to genetic difficulties for which we have not yet found the key.

On the other hand, the homicides, suicides, automobile accidents, narcotic addiction, and war (which account for the large percent of deaths of those between the ages of 18 and 40) go considerably beyond the traditional responsibility of the medical profession. Deep societal factors also play a role.

Changes in life patterns: less cigarettes, less alcohol, less factors which produce violence and/or inadequate personality development, efforts to decrease automobile usage and to assure that those who use them are really able to do so safely, all have the potential of a greater impact on health and life expectancies than changes in our health care delivery system. (One study suggests that a 50% decline in air pollution would decrease economic costs in morbity and mortality as much as an immediate and complete cure of cancer).

However, ignoring all of this, the government has and continues to attempt to influence the directions of health care — in the past, this was ostensibly to encourage more and better care for each citizen. Over the middle half of the century, it enacted programs designed to increase the availability and quality of care — "Cadillac care" for everyone. Programs included millions for research, subsidization of technology spread, Hill-Burton funds for hospitals in rural areas, medical school capitation and research grants, subsidies to local hospital training programs, Medicare, Medicaid, and a National Health Service Corps — and with some apparent success. We do have an increased number of well equipped hospitals. We did increase the number of physicians, and we have experienced a medical technology explosion.

The successes of the past begat the expectations of today; and in the political sphere these become the demands of tomorrow.

The life expectancy for Americans rose from 69.7 years in 1960 to 74.5 years in 1983. Infant mortality was reduced to a record low of 11.2, less than half of the 1960 figure. Deaths from heart disease dropped by 25% and from stroke by 40%. Transplant surgery now provides new hope for those otherwise facing death or disability, with an annual average of 100 heart transplants, 5000 kidney transplants, and 23,000 corneal transplants. We have moved people out of mental hospitals, TB hospitals, and iron lung wards. It can be argued that government played only a minor role in this progress — but in any case, the progress has occurred.

Ah, but here's the rub. It has all had a price. And today the issue has become cost. How, and equally important, who will control costs; and how far beyond costs will the controls go?

I would suggest that many of the governmental interventions which I've listed have contributed to the rise in health care costs — that, in fact, a principle element in this rise has been the interference of non-medical factors in the medical market place.

First the hospitals came under attack, now it's the physicians, and finally it will be the pharmaceutical firms — despite evidence that the bulk of rising costs have been forced on these institutions, not caused by them.

In the magazine, *Business Economics*, Mr. John Virts, an economist with the Eli Lilly Company, has stated that general inflation, the labor intensity of health care, the behavior of wages during inflation, and the pattern of labor productivity changes account for almost all of the medical care price inflation from 1965 to 1981. Mr. Virts' article lists the following specific inflationary factors present from 1972 to 1981:

—The increased hospital unit labor costs (and labor represents 65-70% of hospital costs) rose at an average rate 16.6% higher than the rate used to calculate inflation imposed on the hospital sector.
—The increase in malpractice insurance premiums rose at an average rate four times higher than the rate of increase in the GNP deflator.
—The increase in food and utility prices rose 29 and 66% more rapidly than the GNP deflator.

Mr. Virts states, "since these lie outside the control of hospital markets and providers, price controls are not likely to produce a substantial social benefit. The direction for effective changes in employee and public policy should be focused on patterns of actual health care consumption rather than on price regulation." (Translate that "fee freezer.")

Physicians have experienced the same problems of rising expenses as hospitals. Physicians' prices have not increased out of proportion to those of the economy generally over the last 30 years. The amount of time that a laborer must work for his medical care has not gone up; rather it has gone *down* relative to the service which he can obtain for a given dollar.

The same is true of pharmaceuticals; the older drugs are actually now less expensive — in real dollars — than they were 20 years ago. The rise in costs is due to new drugs which are both expensive to develop and expensive to get approved.

And other factors have contributed to rising costs. During recent decades we have also:

—Experienced increased bureaucracy and paper work for government and insurance companies;
—Built and maintained hospitals in economically marginal locations;
—And we have increased our emphasis on medically oriented preventive care (despite the lack of any real evidence as to how we in our offices are to prevent such major causes of illness as cancer, heart disease and stroke, beyond doing pap smears, examining breasts, and controlling blood pressure and blood sugar which we've done all along anyway).

Over the middle half of the century, the federal government enacted programs designed to increase the availability and quality of care — "Cadillac care" for everyone . . . progress did occur . . . at a price.

Probably the major interference or distortion of the medical marketplace which has contributed to rising costs by encouraging overutilization of the most expensive services has been the provision of first dollar, comprehensive, in-hospital, third party medical coverage, primarily the result of labor-management negotiated contracts, which — as suggested by the Chairman of the Department of Economics from the University of Rochester — has "increased hospital costs, geographic maldistribution of physicians, over-investment in hospital facilities, and physician overspecialization (the so-called "get-a-gimmick" procedures)."

On the other hand, our current health care system is usually the one accused of encouraging the overutilization — i.e., physicians ordering unnecessary tests and keeping patients in hospitals an inordinate length of time. Prior to Medicare and Medicaid, which were enacted in 1965 and which account for 90% of the federal health care outlay, physicians and hospitals devoted a significant percent of their time, effort and facilities to the care of the poor, often without any compensation (and, therefore, the care was not included in the percent of gross national product). After Medicare and Medicaid, hospitals and physicians began to charge for services which they had been providing. The medical profession warned that the institution of those programs would lead costs to rise out of sight, but no one paid any attention. Now the profession is accused of taking advantage of the so called "Blank check" which was provided in those two programs. While I don't believe it's as widespread as some suggest, there undoubtedly has been some abuse. There is no question that it is hard to rationalize a system which produces net incomes for some few physicians of $300,000 to $500,000 per year or more, or a system which provides — at public expense — amenities for every patient equal to those of a fine hotel.

The fact is that the current system will no longer be tolerated by businesses who see their competitive edge eroded by health care costs and who are putting increasing pressure on their insurance carriers to find ways to hold the line, by the third party carriers who react to this pressure by looking for programs which will cut costs but, at the same time, protect their piece of the action, and by government which is reacting to the potential bankruptcy of Medicare and Medicaid and to the sizeable contribution of health care expenditures to the federal deficit. The government's involvement has changed from a concern with giving everyone quality care to controlling the escalation in costs (e.g., government's bill in 1965 was $11 billion; it was $150 billion in 1983). Between 1972 and 1979, gov-

ernment attempted to address this problem through a series of cost containment measures: mandatory review of length of stay, review of the necessity of hospitalization, health planning agencies, certificates of need — all of which were without any great success. The cost of health care doubled during that period of time.

Another approach supported in recent years by federal and state governments has been the establishment of alternate forms of health care delivery, specifically Health Maintenance Organizations (HMO). Not only were the organizational costs of HMOs subsidized, but millions were appropriated for their promotion. More recently, the private sector has also entered the health care delivery field in the form of private, for-profit hospital corporations, Independent Practice Associations (IPAs) and Preferred Provider Organizations (PPOs). Regardless of what we may think of them, HMOs, IPAs and PPOs are a fact of life and, I believe, they're here to stay.

When you come right down to it, there are really only two ways ultimately to control health care costs: The first is to ration the availability of care. This is the approach taken in England where after a certain age you can no longer have stroke rehabilitation or have your degenerated hip replaced. But this approach in this country would be intolerable to the politicians whose constituents vote for them, to the businesses who must negotiate with their unions, and to the third party carriers who want to provide the best coverage for their policy holders. The other alternative is to ration the dollars and force hospitals and doctors to decide where the cuts should be made — either in overhead, or in hospital or physician income, or finally force us to ration the care which will be available for our patients.

This is the approach represented by the current emphasis on Diagnosis Related Groups (the so called DRGs). Designed originally for utilization review, the DRGs were to be used to allow valid comparisons, to adjust for case mixes when comparing different hospitals. However, more recently they have been used as a basis for hospital reimbursement. Despite the fact that in an experimental program in New Jersey a number of problems occurred which were not really resolved, the federal government adopted DRGs as a basis for hospital reimbursement for Medicare patients. As you all know, under DRGs, payment is no longer made according to costs or charges, but on the basis of 1 of a group of 497 codes. Some attempt was made to provide for complications and comorbidities and for the uniqueness of patients; however, there is serious question as to whether these adjustments will be adequate.

There is no question that it is hard to rationalize a system which produces net incomes for some few physicians of $300,000 to $500,000 per year or more, or a system which provides — at public expense — amenities for every patient equal to those of a fine hotel.

Nevertheless, the federal government has drawn the line — Congress has said that it will not appropriate any more money for Medicare no matter how many well documented bills for medically necessary services we send them. We still get to write the checks, but the account may be overdrawn before we make a diagnosis, much less institute treatment. It has been estimated that as many as 10% to 50% of hospital beds in the United States will be eliminated because of decreased reimbursement under DRGs. While it should become increasingly obvious to government that people don't really get sick in diagnostically related groups, that it only seems so from a statistical distance, nevertheless, DRGs or something comparable are also a fact of life, and, I believe, are also here to stay. Moreover, I think we can expect DRGs or something comparable to be extended from governmental to private insurance compensation programs and from hospitals to physicians.

Let me interject here some personal experiences which I think illustrate points which need to be made. All of these cases occurred within a few weeks of each other.

Case #1 — A 70-year-old woman who, on a routine physical, was found to have positive hemoccult stools. G.I. x-rays suggested the possibility of an abnormality in the cecum which was not clearly delineated. Colonoscopy was performed and was believed to show a definite cecal mass. Biopsy was negative; but because of the risk, the patient was subjected to surgery which proved to be entirely negative.

Case #2 — A 60-year-old male with positive stool hemoccults and a colonoscopy which was again biopsy negative. This time surgery showed a villous adenoma — a premalignant lesion — which was resected.

Two other cases illustrate similar points:

Case #3 — The pulmonary physician in our office was asked to see a patient who had been hospitalized one year previously. His x-ray at that time showed some atelectatic change in the lower lung field which his attending physician reviewed and said that he felt was chronic fibrotic change — despite the fact that the radiologist suggested the possibility of an endobronchial lesion. One year later the patient had metastatic lung cancer.

Case #4 — Another member of our group is on a malpractice panel reviewing a case against a physician who noted in the chart that a young female patient had an elevated BUN, elevated uric acid and anemia, but felt that it was not of sufficiently significant severity to pursue since it did not relate to the patient's primary reason for hospitalization. A year later the lady went into intractable renal shutdown.

The point of these cases is to suggest that it takes a lot of pursuit of questionable, or even negative, findings in order to get the one positive. The alternative is to accept a significant degree of risk of debilitating or fatal illness in order to save on the cost of workup. The question is, should physicians just simply pass out pills and adopt the easy economic approach? Or should we, as we always have in the past, err on the side of reducing the risk for the patient? The fact is that the best care is not necessarily the cheapest care; and someone has to stand up for the patients' interests. After all, the *cheapest* patient is a dead patient.

I believe a case can be made that the most cost effective provision of health care existed prior to the institution of Medicare and Medicaid when physicians and hospitals provided the very best care at minimal cost, and where there was indeed a two-tier system — a system for those who could pay for special amenities and another for those who still got good care but without the add-ons. Nevertheless, those times are gone. And the cottage industry which brought about the finest health care and the healthiest people in the world will soon be a thing of the past.

The fact is that the current system will no longer be tolerated by businesses who see their competitive edge eroded by health care costs. . . .

We now live in a new world — not one of our creation, but one in which we must live and practice. We recognize there have been some legitimate criticisms of the systems of the past — previously dealing with the accessibility and quality, and more recently with costs. These criticisms have stimulated pressures for change; and the delivery systems of tomorrow will be different, whether we like it or not. The issue now is not how do we retain the old system, but how do we retain the values of the old system under a new system where health care will increasingly be provided by large corporations or consortiums? A corollary is, who will form and control those entities, and what will be the implications for professional decision making?

Tax credits or other inducements to increase the use of the family as a provider of health care services should also be considered.

May I say at this point that it really doesn't make much difference how we answer those questions if physicians themselves and their organizations are not intimately involved in the policies to be developed in the next two or three years. The tendency of each physician is to be an independent entrepreneur, satisfied with his own ability to make decisions and provide care to his patients, and unwilling to team with others or subjugate himself and his patients' welfare to any kind of larger picture. If doctors are not willing to at least bend from this approach, then change is going to happen to them — not be guided by them — and all of us will become employees and patients of some large, impersonal organization run by government, or insurance companies, or business consortia, or labor unions, whose primary concern is just the bottom line.

The question is, should physicians subjugate themselves to non-professionals; or should they be brought into managerial and policy roles in the development of the new health care systems? Ultimately, I firmly believe that the answer to that question is up to the physicians. Let me suggest why the medical community should be encouraged to participate in future health care decisions.

Physicians are still the number one most respected profession in this country. It is they who have the most direct and positive concern for the welfare of their patients. It is the physicians who should be developing the programs which address the questions of today — then they must implement those things which they can and become effective advocates for those things which others must bring about. This won't be done effectively if the medical profession is ignored or stays on the sidelines. Nor will it really be effective if left to our professional associations reacting through their staff and lobbyists to the initiatives of others.

The alternative to government cost containment is effective, voluntary cost containment. The alternative to the challenge of competition is for medicine to make its product better, to actively participate in organizing and directing new efforts to provide quality care more efficiently. The alternative to practice controls is a better informed public and enlightened public officials.

What does this require? First, physicians must participate with hospitals and insurance companies in their cost containment efforts, and at the same time assure that the clinical significance of those decisions is understood.

If doctors are not willing to at least bend from this approach, then change is going to happen to them — not be guided by them. . . .

Second, physicians must seek in their individual practices and through hospital staff organizations, medical societies and a variety of physician organized and managed practice arrangements, to find more cost-effective means of providing quality care, including: avoiding unnecessary laboratory tests and procedures, minimizing over-utilization of hospital

facilities (both in-patient and out-patient), increasing utilization of physician extenders, avoiding unnecessary duplications which occur in our current system, and finding ways of recapturing the profits generated by the system, but which are currently siphoned off by those outside of the system who offer goods and services to our patients; and then we must use those funds to support the costs of the system and to reduce the cost per encounter to the patient.

Third, all of us — physicians, legislators, businessmen — must become more knowledgeable about health care finance, understand implications for real people in real medical situations, and become advocates for appropriate reform. If a prime problem is comprehensive, first-dollar coverage, we should support efforts to require deductibles and co-payments.

I would like to urge that state and federal legislative bodies consider an "excess hospitalization tax" on clear hazards to health, such as cigarettes, alcohol, and handguns, with the revenue going toward health care services.

Tax credits or other inducements to increase the use of the family as a provider of health care services should also be considered.

Fourth, I believe a good argument can be made that a major cause of the pressures confronting our profession today is the ignorance of the public:

—Ignorance of their own bodies, how to maintain health, and how and when to deal most appropriately with physical complaints;

—Ignorance of the significant risks associated with cars, drugs, "free-love," alcohol, and of the changes which might improve the healthful nature of lifestyle and environment;

—Ignorance of the true costs and the social, economic, and political implications of proposed changes in both financing and organization of our health care system.

To this end, all of us must become educated ourselves — and then we must all become educators. As patients better understand the health care system and the ramifications of changes in it, and as they increase their capacity for real partnership in health care encounters, their need and demand for protection through regulation will decrease.

It's time for business and government to look toward the medical profession for its understanding and encourage it to take a leadership role in addressing the difficult decisions which confront us. And it is up to our profession to accept this challenge. It is we who should be forming the systems of the future while holding on to the values of the past.

I would like to urge that state and federal legislative bodies consider an "excess hospitalization tax" on clear hazards to health, such as cigarettes, alcohol, and handguns, with the revenue going toward health care services.

Finally, all of us as individuals must become involved in the dialogue with business, in hospital policy-setting and, equally importantly, in the political process. Our goal is to convince the politicians that it is possible to achieve progress controlling health care costs, but without "throwing the baby out with the bath water"; that they ought to avoid further regulatory or market interference when competition is just now starting to work; let's not continue to change the rules. (As a professor in economics once said, "our economic system can adapt to any tax structure provided it isn't changed too often.") Health care is much the same. Secondly, government must avoid coming down on one side or another of the competitive equation. Third, if government must continue to be involved, it ought to avoid wherever possible compromising the availability of quality care. Fourth, if government decides not to provide dollars for a given area of health care, such as dialysis or heart transplant, it must not prohibit those who can afford to buy more than the public is willing to subsidize the right to buy such services. The fact is that if some can buy the service, others will probably benefit by its availability. And finally, physicians and hospitals must be allowed to create the new delivery systems of the future. We must even be willing to reassess the ethics of the past to determine their appropriateness in these new systems. For it is only the providers who can adequately determine how best to provide quality health care, at reasonable costs, but without cutting costs at the expense of the patient.

To this end, each of us must become politically involved. It is important, but not enough, just to provide funds or call your legislator or write your congressman on a specific issue (though please do). If we really want to do the job, we must get in early, become personally involved in the party of our choice, and work in the campaigns of individual candidates. Through such early and positive identity, you will give meaning and a better reception and response to the phone call or letter which you provide later. Dwight Eisenhower said that politics should be the part-time avocation of every citizen and the same is especially true for physicians. For if this does not happen, we run the very real risk of cheap medicine, practiced by inferior physicians.

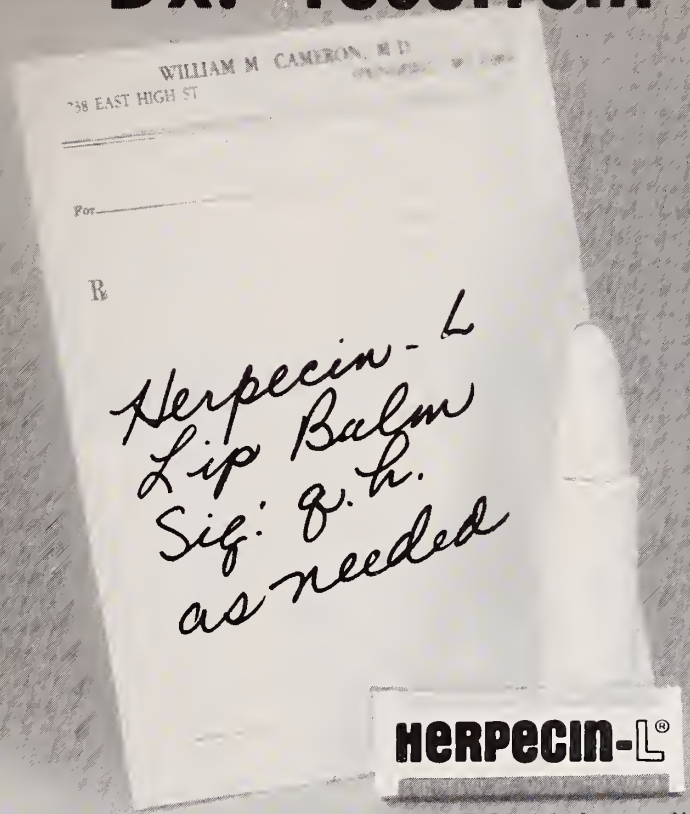
There is a story from the book by Ayn Rand, *Atlas Shrugged,* which I think can be applicable to our situation.

The hero, Fernando, is holding forth before a group of people regarding the status of society and the problems which appeared to be occurring. Finally, a lady in the back of the room asks, "But what will happen to the people?" Fernando says, "Exactly what they deserve."

And the lady replies, "Oh, how sad."

It doesn't have to be sad for medicine. After all, we know the challenge. The question is, will we give the time, money and effort required to respond to the challenge — after all, we probably *will* get . . . exactly what we deserve.

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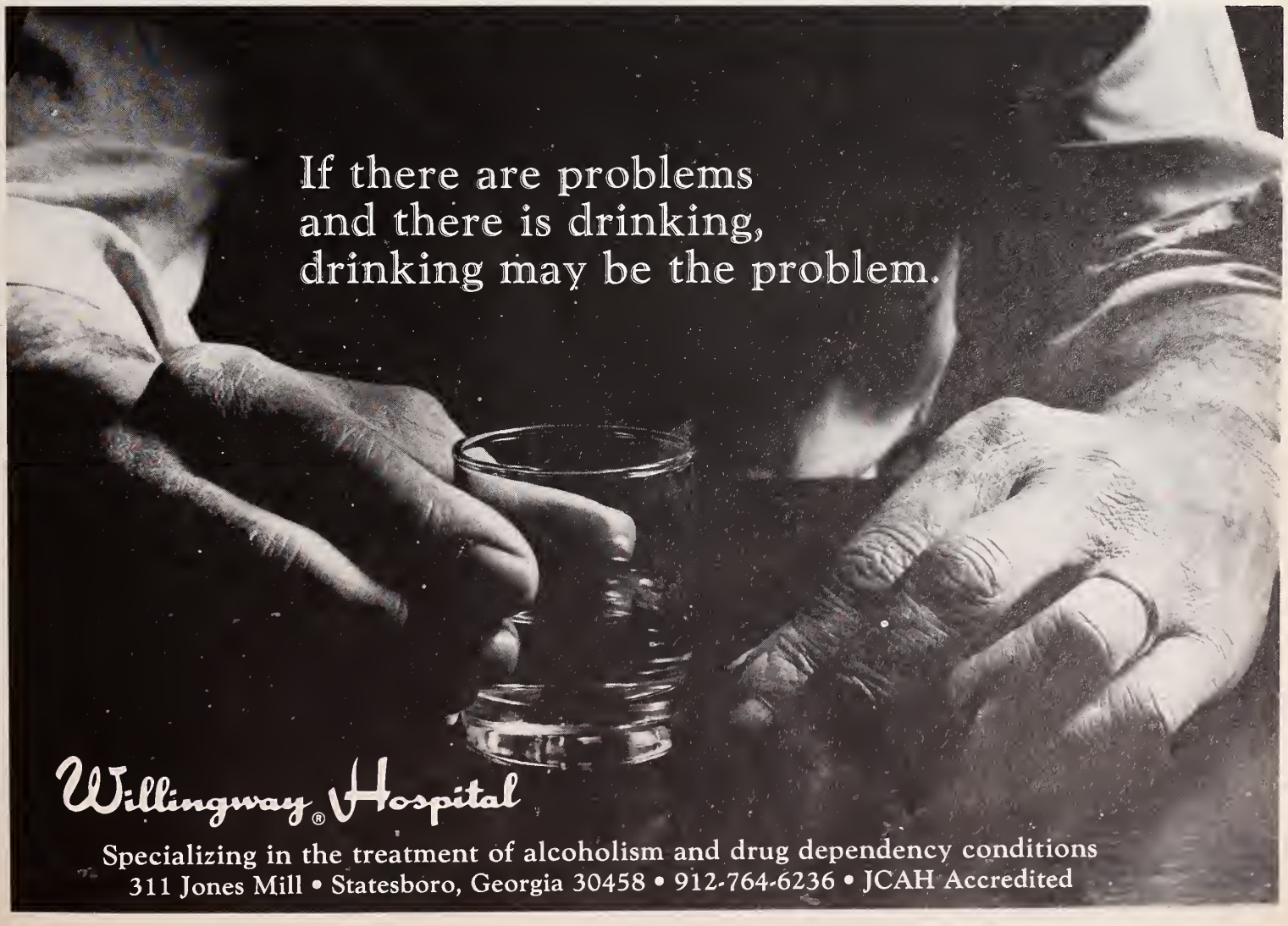
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"An Ounce of Prevention . . ."

How One Community Wellness Program Has Succeeded

Rose Ann Rigby Weaver, M.D.

PREVENTIVE MEDICINE has taken a back seat in the practice of medicine during the past decades. With the advent of Wellness Programs, physical fitness and preventive medicine may finally take the front seat they so much deserve.

A community Wellness Program can be organized very easily for very little cost, no matter how small or large the community. Cooperation and utilization of the community's resources is the secret for establishing a successful program.



(This illustration is reproduced with permission of Dr. Eugene J. Gangarosa, Director, Master of Public Health Program of Emory University, who developed the picture to symbolize the message of public health.)

This past fall, Morgan Memorial Hospital sponsored its first Wellness Program for all the people in the community. The supervised program was 3 months long and divided into three stages. It began September 1, 1983, and ended on Thanksgiving Day with an early morning Fun Run. The three stages were implemented as follows:

Stage I — A. Medical evaluation including % body fat,* blood lipids (triglycerides, HDL, and LDL cholesterol), uric acid, glucose, renal and liver function tests, iron levels, resting EKG, and treadmill stress test.

B. Results of the above tests were explained to participants. Also, each participant's Cardiac Risk Profile was explained.

Stage II — A. One hour of daily supervised aerobic exercise classes (Monday-Friday) and 30-minute early morning run/walks daily, including weekends.

B. 30 minutes teaching sessions once a week. Healthy lifestyles were emphasized, and nutritious, well balanced diets were discussed as well as relaxation techniques. Two of these sessions were luncheon sessions at the local Health Food Store.

Stage III — "On your own" program.

Characteristics of the Participants

Twenty-four people registered for the program. Seven dropped out, leaving 17 who completed the program. There were 14 women and three men. Their ages ranged from 22 to 70 years. Seven were between 30-39, four were between 40-49, and two each were in their 50s and 60s. The weight range of the group was from 109 to 272. One third were not obese, one third were moderately obese, and one third were severely obese.** The recommended weight loss for the group was 625 pounds. This was determined by their % body fat levels.

Exercise prescriptions for the group varied from walking 2 miles in 30 minutes to running 4 miles in 30 minutes. The majority of the participants were given an exercise prescription for approximately 3 miles in 30 minutes. The exact amount of exercise that was safe for each individual was determined by their treadmill stress tests. None of the participants smoked cigarettes. All had some correctable risk factors for coronary disease.

Results of the Program

Two people lost over 30 pounds within the 3-month period. Three lost over 20 pounds, and three lost between 6 and 11 pounds. The total weight loss for the group was approximately 175 pounds.

The majority of the participants reached their exercise goals which were set by the results of their stress test.

The correctable cardiac risk factors found in the group included nine with high triglyceride levels, 13 with elevated resting blood pressures, three with elevated LDL cholesterol, two with low HDL cholesterol, one with high blood sugar;† eleven were obese. A correlation was found be-

* % body fat was determined by using the Syndex electronic body fat calculator.

Dr. Weaver practices internal medicine. She is Coordinator of the Wellness Program and Chairperson of the Wellness Committee, Morgan Memorial Hospital in Madison. Send reprint requests to her at 172 North Main St., Madison, GA 30650.

** Moderately obese was defined as 10-20 pounds over the desired weight as calculated by the percent body fat. Severely obese was defined as greater than 20 pounds over the desired weight.

† Normal limits were determined for each age group by using the Coronary Risk Profiles set up by the Cooper Clinic, Dallas, Texas.

tween being overweight and having a high triglyceride level and elevated resting blood pressure.

Funding of the Program

The hospital established a special Wellness Fund account to keep that money separate from its other finances.

Cooperation and utilization of the community's resources is the secret for establishing a successful wellness program.

Three industries and several civic organizations were asked to contribute to the program in two ways: 1) to participate, and 2) to contribute to the Wellness Fund. The industries generously contributed $550.

The Cost of the Program

1. Resting EKG	$ 30.00
2. Stress test (with exercise prescription)	100.00
3. % Body fat	20.00
4. SMA 18 — Blood profile	30.00
5. Cardio-Respiratory Exam, Cardiac Profile Risk, and Reports	20.00
TOTAL	200.00
MINUS discount given by Dr. Weaver	−150.00
	50.00
6. 3 months of exercise at Amazing Place	40.00
COST PER INDIVIDUAL	90.00
Paid from the Wellness Fund per individual	−20.00
ACTUAL COST TO EACH PARTICIPANT	$70.00

The two luncheon sessions at the Health Food Store were $62.34. These were paid for out of the Wellness Fund.

There were no fees for films, speakers, and daily supervised walks. The stationery and postage were contributed. The Fitness Festival at the World Congress Center in Atlanta, with speakers Dr. Kenneth Cooper, Dr. George Sheehan, and Jim Fix, was underwritten by ITT Life Insurance Corporation. Morgan Memorial Wellness Program had a booth at this festival, and the participants provided their own transportation.

Some Comments From Participants

One lady in her 60s said, "I could walk only two laps around the hospital when I started the program, and then I was huffing and puffing for air and had to go sit down in the car. Now (at the end of the 3 months), I can walk eight laps, and I'm not breathless at all, but have to stop to go on to my exercise class." (Three laps around the hospital grounds equals 1 mile.)

Another lady in her 40s said, "The program has really been a worthwhile project for me. I have achieved some of the goals set for me, but beyond that, I cannot begin to tell you how much better I feel now than I did before I started the program."

Another participant said, "We will be in the Wellness Program next year because we believe in it. We want it to grow to greater levels of awareness within ourselves and others that we all may realize the joys of a better quality of life. We feel we need this type of annual yard stick."

The supervised program was 3 months long and divided into three stages.

Comments

Our program is not original. The idea came from a pre-existing program in Indiana, which was described in *The Physician and Sports Medicine,* Vol. 11, No. 7, July 1983, p. 131.

Our program was successful because we used our community resources and cooperated with all those involved in the program. The hospital cooperated with the local health and fitness spa which provided the supervised exercise classes. The fitness lectures were provided by local individuals who had already incorporated fitness into their daily routines. These individuals contributed their time, thus alleviating some of the cost of the program.

In an attempt to keep the cost of the program as low as possible, follow-up blood profiles were not done. The participants did express an interest in participating in next fall's program, and we may obtain our follow-up profiles then.

The majority of the participants were given an exercise prescription for approximately 3 miles in 30 minutes.

The formal supervised stages (I and II) of the program ended Thanksgiving Day with a fun run. It was exactly that — a lot of fun as 28 runners and walkers went 3 miles around the hospital grounds trying to win the turkeys which were the prizes given to the first man and woman who crossed the finish line.

Stage III of the program is ongoing. The participants will continue this stage for life as they incorporate fitness and regular exercise into their daily lifestyles.

Our program was further successful because 17 people in our community did change their lifestyles and incorporated good, nutritious eating habits and regular exercise into their daily routines. Also, cardiac risk factors were clearly defined in each participant, and each was instructed in how these could be corrected. Through our teaching sessions everyone became better educated concerning the health benefits of proper diet and exercise. The program was successful in several other ways of personal growth and fun as brought out by the comments made by the participants. Morgan Memorial Hospital plans to make the Wellness Program an annual event and highly recommends that similar programs be offered in other communities around the country.

Revisiting the Physician's Obligation to Comply With Requests to Produce Documents

by Robert N. Berg

PHYSICIANS, OF COURSE, have an ethical and legal duty to keep confidential and protect the privacy of medical records and information concerning their patients.[1] Nonetheless, physicians routinely are asked or required to disclose all or portions of those medical records. For example, by statute, physicians are obligated to disclose the existence of certain "notifiable diseases" to the Georgia Department of Human Resources.[2] Similarly, a physician's medical records may be sought by an attorney, through the issuance of a subpoena calling for the production of those medical records; in some cases, such as where the physician objects to the production of medical records pursuant to the subpoena, the attorney may go further and attempt to obtain a court order requiring the production of the applicable medical records.

With the advent of the Request . . . an attorney is authorized to request the medical records, without having to depose the treating physician/record custodian.

A particularly difficult situation with respect to the disclosure of medical records occurs when the physician receives a "request for production of documents" (a "Request") from an attorney in connection with a lawsuit to which the physician is not a party. Essentially, a Request is a creature of statute,[3] created in order to allow the judicial system to function more efficiently: A *subpoena* (as opposed to a Request) for the production of documents may be served upon a non-party *only* if the non-party is to be deposed[4] or testify at a hearing or trial;[5] this means, in the context of the discovery of medical records, that an attorney desiring to obtain copies of medical records with respect to the treatment of a patient (presumably, a party to the lawsuit) may only obtain those records by subpoena if the attorney first sets a deposition of the person from whom the records are sought (e.g., the treating physician or his or her recordkeeper) and, in serving notice of the deposition to that person, also includes a subpoena for the production of the relevant medical records.

With the advent of the Request, however, an attorney is authorized to request the medical records, without having to depose the treating physician/record custodian. Upon receipt of a Request, a physician has two choices: Comply with the Request, or forward written objections to the Request to the attorney.[6] In the latter case, the attorney may seek a court order requiring the release of the requested medical records; however, the court will first hold a hearing, at which the patient-party may object to the production of the medical records, among other reasons, on the grounds that the medical records are confidential and therefore should not be disclosed.

Until recently, it was thought that physicians receiving Requests were placed in a dilemma. By statute, a physician who discloses otherwise confidential medical records on the basis of authorization by the patient or his or her representative or pursuant to a subpoena or court order was immune from liability, to the patient or any other person, arising out of such disclosure.[8] Also by statute, a physician who discloses confidential medical records "pursuant to laws requiring disclosure" was similarly immune from liability.[9] Disclosure pursuant to a Request did not appear to be covered by either grant of statutory immunity, since a Request, at least technically, was neither a subpoena nor a court order, and since the statute authorizing the use of Requests appeared to make compliance with a request discretionary, rather than mandatory. Accordingly, in the absence of patient authorization, physicians oftentimes were required to refuse to comply with a Request, instead requiring the attorney to obtain a subpoena or court order calling for the productioon of the applicable medical records —

Prepared at the request of the Medical Association of Georgia. Mr. Berg is a Partner in the firm of Powell, Goldstein, Frazer and Murphy, General Counsel to the Association, 1100 C&S National Bank Building, Atlanta, GA 30335.

so that the physician, by complying with the subpoena or court order, would obtain the statutory grant of immunity.

A recent case decided by the Georgia Court of Appeals appears to eliminate the necessity for physicians to refuse to comply with Requests, in that it expressly recognizes the applicability of statutory immunity in that situation. The bad news, however, is that the Court of Appeals appears to have imposed a significant burden upon physicians seeking to comply with a Request and obtain that immunity.

In *Jones v. Thornton,*[10] the patient sued her physician to recover damages for invasion of privacy and libel, based upon the physician's compliance with a Request seeking the patient's medical records in connection with another lawsuit involving the patient. The physician received the Request on February 2, 1981; the Request called for the production of all medical records in the physician's possession connected with his treatment or examination of the patient. Accompanying the Request was a letter indicating, among other things, that all such records were relevant to the lawsuit and that the physician could comply with the Request by mailing copies of the records within 30 days. The physician complied on February 3, 1981.

A recent case decided by the Georgia Court of Appeals appears to eliminate the necessity for physicians to refuse to comply with Requests, in that it expressly recognizes the applicability of statutory immunity in that situation.

On February 10, 1981, the patient's legal counsel, having been served with a copy of the Request, filed objections to it. However, by this time, the objections were too late, as the records had already been produced.

The Court of Appeals commenced its analysis by recognizing the duty imposed on physicians to protect the privacy of their patients. The Court also recognized that a breach of that duty may give rise to an action for damages.

The Court then found that the physician's compliance with the Request could not give rise to liability to the patient, because of the statutory immunity, described above, providing that "any person, corporation, authority, or other legal entity acting in good faith shall be immune from liability for the transmission, receipt, or use of medical matter disclosed pursuant to laws requiring disclosure. . . ." Thus, for the first time in Georgia, the availability of statutory immunity for physicians in the context of complying with Requests was recognized by a court.

A request is a creature of statute, created in order to allow the judicial system to function more efficiently.

The manner in which the Court analyzed this issue, however, appears to have resulted merely in the substitution of one burden for another upon physicians in dealing with Requests. Specifically, the Court viewed the question of whether or not the physician acted in "good faith," as required under the immunity statute, in terms of whether or not the medical records produced were relevant to the patient's previous lawsuit. Ultimately, the Court found that the records in question were relevant, and that the physician, therefore, had acted in good faith in producing those records. In reaching this conclusion, however, the Court stated that:

> [The physician] was immune from liability for invasion of the [patient's] privacy based upon the transmission of the records to [the requesting attorney] in response to the [Request]. We also agree, however, with the [trial] court's observation that, *having failed to verify the nature of the [patient's previous lawsuit] or to seek legal advice with respect to his obligations in the matter, [the physician] placed himself at risk* by complying immediately with the discovery request and thereby denying the [patient] an opportunity to obtain a court ruling on her objections to the request. . . . As stated by the trial court, in this instance, on a close question, [the physician] was lucky. (Emphasis supplied.)

From this, it appears that the Court of Appeals has enunciated a rule which requires a physician, upon receiving a Request, to take certain affirmative steps (e.g., contacting his or her attorney or otherwise attempting to determine whether or not the requested records are relevant to the lawsuit involved)[12] in order to establish the physician's good faith. Alternatively, the physician may simply wait out the

30-day period within which he or she can respond to the Request, so as to allow the patient adequate time to file objections to the Request with the court.

In either case, it appears that the judicial economy sought to be achieved through the statutory authorization for the use of Requests may be undercut by the Court of Appeals' opinion, to the extent that physicians desiring to obtain statutory immunity, rather than simply complying with Requests, must themselves determine, or retain legal counsel to determine, the relevancy of the requested records, or delay the production of documents in order to ensure that the patient does not lose his or her right to object to the requested production.

[*Decisions rendered by the Georgia Court of Appeals are subject to appeal to the Supreme Court of Georgia, which has the power either to affirm or to reverse the decision of the Georgia Court of Appeals, in whole or in part, with or without comment. Accordingly, it is possible that the opinion discussed in this article, although representing the current state of the law in Georgia, may be substantially altered or modified by the Supreme Court. In the event that the case discussed in this article is appealed and subsequently reversed by the Georgia Supreme Court, we will inform you of that decision, once it is reached, in a subsequent issue of the* Journal.]

Notes

1. *Orr v. Sievert,* 162 Ga. App. 677 (1982); *Current Opinions of the Judicial Council of the American Medical Association* (1984 ed.), at Section 5.05.
2. O.C.G.A. §31-12-2.
3. O.C.G.A. §9-11-34(c).
4. O.C.G.A. §9-11-45.
5. O.C.G.A. §24-10-22(a).
6. O.C.G.A. §9-11-34(c).
7. *Id.*
8. O.C.G.A. §24-9-40.
9. O.C.G.A. §24-9-44.
10. 172 Ga. App. 412 (1984).
11. *Id.*, 172 Ga. App. at 413.
12. Since the requesting attorney in the *Jones* case specifically indicated to the physician, in writing, that the documents called for in the Request were relevant to the lawsuit, and since the Court of Appeals failed to consider this point in determining whether or not the physician acted in "good faith," it must be assumed that a physician, in responding to a Request, may not simply rely on the requesting attorney's assurances that the requested medical records are relevant to the lawsuit.



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Recurrent Cellulitis: A Late Complication of Coronary Artery Bypass Surgery

by Robert B. Copeland, M.D., and Michael T. Simpson, M.D.

A CLINICAL SYNDROME of acute, severe, lower extremity cellulitis occurring as a late complication of coronary artery bypass surgery has recently been reported.[1-3] The cellulitis involves the leg used for resection of vein grafts, occurs 2 months to 4 years after surgery, and is often recurrent. It is characterized by abrupt onset of high fever and systemic toxicity, marked leukocytosis and a localized erythematous, edematous, painful area of cellulitis without apparent preceding skin lesions in the area involved. Some patients have had acute, localized leg pain coincident with the onset of severe systemic symptoms, but a delay of as much as 24 hours before the appearance of typical features of cellulitis. Failure to recognize this syndrome may lead to superfluous diagnostic tests, delay in recognition, and inappropriate therapy. These are of major concern, as these patients may be severely ill with cardiovascular disease.

Over the past 4 years, we have recognized this syndrome in seven patients admitted to a 275-bed community hospital. The following patient exemplifies our experience.

Case Report

A 54-year-old man with history of chest pains and severe three-vessel coronary artery disease had coronary artery bypass surgery at age 49. He subsequently was free of angina and returned to full activity. He had no history of diabetes or phlebitis, and there was no clinical evidence of venous or lymphatic disease. He had no apparent fungus infections or other skin disorders involving the feet or legs.

Approximately 2 years after coronary artery bypass surgery, he experienced an acute illness characterized by fever up to 103° F. and marked prostration. Approximately 24 hours after the onset of fever and chills, he noted the presence of a tender, erythematous area on the medial aspect of his leg including the lower part of his venectomy scar. There was no apparent local source of infection or break in his skin. His WBC count was 22,000, with 70% polymorphonuclear leukocytes and 16% band forms. Multiple blood cultures were negative. Marked improvement was apparent within 24 hours after parenteral penicillin was started.

This clinical disorder merits greater physician awareness and attention to preventive measures.

He subsequently did well for about 1½ years, then again became very ill with abrupt onset high fever (104° F. orally) and rigors. At the time of his admission to the hospital, there were no apparent features of localized infection. Specifically, there were no clinical indications of cellulitis of the venous donor leg. Within 6 hours, he experienced pain in the area of the right lower leg involved in his previous cellulitis. Approximately 24 hours after the onset of the acute illness, abnormalities of the skin became evident in the painful area. He developed a red, indurated edematous lesion with a well demarcated, slightly elevated border. Multiple blood cultures were negative. On intravenous penicillin, he again promptly improved and became afebrile within 36 hours. The area of cellulitis subsequently had superficial desquamation.

Drs. Copeland and Simpson are from the Georgia Heart Clinic and The West Georgia Medical Center in LaGrange. Send reprint requests to Dr. Copeland, 109 Medical Dr., LaGrange, GA 30240.

Articles for this Page are sponsored and approved by the American Heart Association, Georgia Affiliate. Those wishing to contribute papers to this Page are invited to send them to Dr. Laurence O. Watkins, "Heart Page" Editor, Section of Cardiology, Dept. of Medicine, MCG, Augusta, GA 30309.

Discussion

Cellulitis or erysipelas with clinical features suggestive of Group A streptococcal infection, associated with acute systemic illness, including high fever and prostration, occurring in the legs from which veins have been resected months to years previously for coronary artery bypass surgery appears to be an important syndrome.[1-3]

Failure to recognize this syndrome may lead to superfluous diagnostic tests and delay in recognition and to inappropriate therapy.

The skin lesion seen with this post venectomy syndrome has clinical features strongly suggestive of Group A streptococcal infection but only a few positive cultures have been reported.[1]

The pathophysiologic mechanisms in this syndrome are not fully established. Impairment of local venous and lymphatic drainage caused by vein resection surgery is probably the major factor.[4, 5] Previous phlebitis and underlying venous insufficiency may contribute to the syndrome in some patients. Inflammatory scarring associated with one episode of cellulitis may cause additional damage and increase the likelihood of recurrent infections. An infection by tinea pedis has appeared to be the site of entry of streptococci in several cases reported, but Group A streptococci can invade normal skin.[7, 8]

In view of the severity of the illness and the potentially compromised cardiovascular status of many patients at risk, prompt treatment with high dose intravenous penicillin or a suitable substitute in allergic patients is indicated.

The inflammatory features clinically evident with this syndrome are impressive and are probably due, at least in part, to immunologically mediated reactions. Human and animal research studies indicate that recurrent streptococcal cellulitis requires both streptococcal exotoxins and a hypersensitive host.[9, 10] Despite the absence of cultural confirmation of specific infective organisms, the patients reported have appeared to respond dramatically to penicillin. In view of the severity of the illness and the potentially compromised cardiovascular status of many patients at risk, prompt treatment with high dose intravenous penicillin or a suitable substitute in allergic patients is indicated.

The incidence of this recently described syndrome is not yet known. The number of patients at risk is large and increasing at a rate of more than 200,000 per year. Because of the potential clinical problems and the costs involved, this clinical disorder merits greater physician awareness and attention to preventive measures. The syndrome should be widely recognized as a significant late complication of coronary artery bypass surgery. Patients at risk should know its features and should know the importance of optimal foot care as well as the need for prompt treatment of any fungal infections or other disorders involving the skin of their legs or feet. The appropriateness of utilizing measures to minimize edema and improve venous circulation in the legs from which veins have been resected should be emphasized.

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PERSONALS

Third District

Columbus orthopaedic surgeon, **James R. Andrews, M.D.,** was appointed to the Hospital Corporation of America Board of Governors. Dr. Andrews is president of the Hughston Sports Medicine Hospital's medical staff.

Fifth District

David M. Martin, M.D., was elected as a Fellow of the American College of Physicians.

The 7th Edition, *Clinical Electrocardiography,* Year Book Medical Publishers, Chicago, Illinois, by **Bernard S. Lipman, M.D.,** was included in the recommended list of books and journals for a core "Library for Internists V" that appeared in the March, 1985, issue of *Annals of Internal Medicine* (volume 102 Number 3). Also included is 5th Edition, *The Heart,* by **J. Willis Hurst, M.D.**

Sixth District

Michael Simpson, M.D., was recently named to the American Heart Association's Advanced Cardiac Life Support (ACLS) National Faculty.

Fayetteville physician, **Thomas J. Busey, M.D.,** was appointed to the Composite State Board of Medical Examiners for Georgia.

Seventh District

Alfred Colquitt, Jr., M.D., an obstetrician-gynecologist from Marietta, retired from practice February 22. Dr. Colquitt was one of the first doctors on the Kennestone Hospital staff. After delivering three generations of babies in Cobb County and soothing young mothers' fears for over 40 years, Colquitt will contend, among other things, with tee schedules and Them Dawgs. "I'll miss the ego trip doctors get when they talk to patients," he says. "I like to practice, but there are many bright young doctors in Marietta who can pick up the cause." He is a Fellow of the American College of Surgeons and Past President of the Cobb County Medical Society. Dr. Colquitt served on the Cobb County Housing Authority for 15 years, serving as its chairman for 5 years. He was among those who started the first free OB clinic in Marietta in the late 1950s. Colquitt has served in many other civic capacities as well. He is married to Dr. Luella Klein, president of the American College of Gynecology and Obstetrics, and they have three sons.

Eighth District

Family practitioners, **Jesse L. Parrott, M.D.,** and **W. A. Dickson, M.D.,** of Hahira, recently retired.

During his 40-year medical career, Dr. Parrott delivered about 5000 babies, and frequently treated four generations of the same family. Parrott is retiring because he has lost most of his central vision due to a case of histoplasmosis contracted 40 years ago. He has an interest in art and writing and he said his 7-acre yard will keep him busy. He likes to grow roses.

Dr. Dickson is going into semi-retirement and plans to move to St. Simons where he will work weekends in the hospital emergency room. "I feel I'm too young to retire completely and in too good health not to work, but I want to slow down. . . . I've enjoyed my years in practice. It's the only thing I really ever wanted to do. . . . (Government regulations) tend to take the pleasure out of practicing medicine, and when the pleasure's gone, it's to the doctor's and the patient's benefit to retire."

Tenth District

John R. Curtis, M.D., director of University Health Services at the University of Georgia for 17 years, has entered into private practice as medical director of Charter Winds Hospital. Dr. Curtis has been a member of the American College Health Association since 1966 and served as its president from 1978-79. He is a Fellow of the American Psychiatric Association and was named Psychiatrist of the Year in 1979.

Anil K. Mandal, M.D., of Augusta, has been granted a $1,000 Traveling Scholarship from the American College of Physicians to study prostaglandin infusion as a means of improving acute tubular necrosis in cadaveric graft. He is one of six Traveling Scholars named by the ACP this year. Dr. Mandal is presently Professor of Medicine at the Medical College of Georgia.

Internist, **Diane K. Smith, M.D.,** from the Medical College of Georgia, was elected as a Fellow of the American College of Physicians.

SPECIALTY SOCIETIES

At its recent Annual Meeting, the **Georgia Chapter of the American College of Surgeons** elected the following officers: *Fleming Jolley,* President; *LaMar McGinnis,* President-elect; *Ellis Keener,* Secretary; and *Robert B. Smith, III,* Treasurer. In the Residents' Paper Competition, the winners were: First Prize: *John Mansberger,* Medical College of Georgia, Department of Surgery ($500); and Second Prize: *Gail Kay,* Medical Center of Central Georgia, Department of Surgery ($200).

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MEDICAL MEETING CALENDAR

MAY

23—*Macon:* **Medical Fair Orientation and South Georgia Conference on Physician Placement.** Contact Lamont Nottingham, MAG, 938 Peachtree St., Atlanta 30309. PH:404/876-7535 or 800/282-0224 (toll free in Ga.).

23-24—*Atlanta:* **Update in Pathology and Laboratory Medicine.** Category 1 credit. Contact Office of CME, Emory Univ. Sch. of Med., 1440 Clifton Rd., Ste. 110, Atlanta 30322. PH:404/329-5695.

23-24—*Callaway Gardens:* **13th Annual Perinatal Medicine Conference, "Perinatology in Practice: 1985."** Category 1 credit. Contact Div. of Perinatology, The Medical Center, P.O. Box 951, Columbus 31994. PH:404/571-1000.

25—*Atlanta:* **A Comprehensive Course on the ND:YAG Laser.** Category 1 credit. Contact Ginger Lineberger, Hallum-Arnold Eye Found., Inc., 3280 Howell Mill Rd., Ste. 104, Atlanta 30327. PH:404/351-2713.

30—*Helen:* **North Georgia Conference on Physician Placement and Medical Fair Orientation.** Contact Lamont Nottingham, MAG, 938 Peachtree St., Atlanta 30309. PH:404/876-7535 or 800/282-0224 (toll free in Ga.).

31-June 2—*Sea Island:* **Georgia Neurosurgical Society.** Contact Joseph Barnett, M.D., Pres., GNS, 776 Canton Rd., Marietta 30066.

JUNE

1—*Augusta:* **GAFP Regional CME Meeting.** AMA Category 1 and AAFP prescribed credits. Contact Camille Day, Executive Vice President, GAFP, 11 Corporate Square, Ste. 250, Atlanta 30329. PH:404/321-7445.

10-13—*Kiawah Island, SC:* **16th Annual Internal Medicine Symposium.** AMA Category 1 and AAFP prescribed credit. Contact Div. of Cont. Ed., MCG, Augusta 30912. PH:404/828-3967.

13-14—*Atlanta:* **A Basic Course in Phacoemulsification and Extracapsular Cataract Extraction with Posterior Chamber Lens Implantation.** Category 1 credit. Contact Ginger Lineberger, Hallum-Arnold Found., Inc., 3280 Howell Mill Rd., Ste. 104, Atlanta 30327. PH:404/351-2713.

14-16—*Hilton Head Island, SC:* **Georgia Society of Dermatologists Annual Meeting.** Category 1 credit. Contact Gerald Chotiner, MD, 3250 Howell Mill Rd., Atlanta 30327. PH:404/352-1730.

20-22—*Atlanta:* **Contact Lens Seminar.** Category 1 credit. Contact Office of CME, Emory Univ. Sch. of Med., 1440 Clifton Rd., Ste. 110, Atlanta 30322. PH:404/329-5695.

20-23—*Sea Island:* **Georgia Chapter, Amer. Acad. of Pediatrics Spring Meeting.** Category 1 credit. Contact William C. Mankin, Exec. Secy., Ga. Chapter, AAP, 4059 Land O'Lakes Dr., Atlanta 30342. PH:404/237-3922.

21-22—*Augusta:* **Flexible Fiberoptic Sigmoidoscopy for Primary Care Physicians.** Category 1 credit. Contact Div. of Cont. Med. Ed., MCG, Augusta 30912. PH:404/828-3967.

JULY

11-13—*Kiawah Island, SC:* **Clinical Obstetrics — Recent Advances.** AMA Category 1 and AAFP prescribed credit. Contact Div. of Cont. Ed., MCG, Augusta 30912. PH:404/828-3967.

15-18—*Hilton Head Island, SC:* **Clinical Cardiology.** AMA Category 1 and AAFP prescribed credit. Contact Div. of Cont. Ed., MCG, Augusta 30912. PH:404/828-3967.

18-21—*Kiawah Island, SC:* **Pulmonary Diseases.** Category 1 credit. Contact Div. of Cont. Ed., MCG, Augusta 30912. PH:404/828-3967.

24-28—*Kiawah Island, SC:* **Critical Care Symposium.** AMA Category 1 and AAFP prescribed credit. Contact Div. of Cont. Ed., MCG, Augusta 30912. PH:404/828-3967.

29-31—*Kiawah Island, SC:* **Pediatric Update — 1985.** AMA Category 1 and AAFP prescribed credit. Contact Div. of Cont. Ed., MCG, Augusta 30912. PH:404/828-3967.

AUGUST

1-3—*Kiawah Island, SC:* **Clinical Genetics.** Category 1 credit. Contact Div. of Cont. Ed., MCG, Augusta 30912. PH:404/828-3967.

5-9—*Hilton Head Island, SC:* **Your Practice, Your Money, Your Family.** Category 1 credit. Contact Div. of Cont. Ed., MCG, Augusta 30912. PH:404/828-3967.

12-16—*Kiawah Island, SC:* **Summer Imaging.** Category 1 credit. Contact Office of CME, Emory Univ. Sch. of Med., 1440 Clifton Rd., NE, Ste. 110, Atlanta 30322. PH:404/329-5695.

15-18—*St. Simons Island:* **Georgia Psychiatric Association Meeting.** Category 1 credit. Contact James Moffett, MAG, 938 Peachtree St., Atlanta 30309. PH:404/876-7535 or 800/282-0224 (toll free in Ga.).

24-25—*Callaway Gardens:* **Georgia Society of Anesthesiologists and Alabama Society of Anesthesiologists.** Category 1 credit. Contact William Hammonds, MD, Secy-Treas., GSA, Emory Univ. Hosp., Dept. of Anesth., 1364 Clifton Rd., Atlanta 30322. PH:404/321-0111.

30-September 1—*Sea Island:* **American College of Physicians.** Contact Malcolm Page, MD, MCG, Augusta 30912. PH:404/828-0211 Ext. 4018.

SEPTEMBER

5-8—*Ponte Vedra, FL:* **Georgia Thoracic Society Tri-State Meeting.** Contact Edwin Kramer, Amer. Lung Assn., Ga. Div., 2452 Spring Rd., Smyrna 30080. PH:404/434-5864.

6-7—*Sea Island:* **Georgia Society of Anesthesiologists and the South Carolina Society of Anesthesiologists.** Category 1 credit. Contact William Hammonds, MD, Secy-Treas., GSA, Emory Univ. Hosp., Dept. of Anesth., 1364 Clifton Rd., Atlanta 30322. PH:404/321-0111.

15-18—*Sea Island:* **Georgia State OB/GYN Society Meeting.** Contact Ralph Tillman, MD, Pres., Ga. State OB/GYN Society, 5040 Snapfinger Woods Dr., Ste. 204, Decatur 30035. PH:404/981-1123.

18-20—*Savannah:* **Neonatology — The Sick Newborn.** AMA Category 1 and AAFP prescribed credit. Contact Div. of Cont. Ed., MCG, Augusta 30912. PH:404/828-3967.

19-21—*Sea Island:* **Georgia Surgical Society Meeting.** Category 1 credit. Contact William C. McGarity, MD, Secy-Treas., GSS, Emory Univ. Clinic, 1365 Clifton Rd., Atlanta 30322. PH:404/321-0111, X 3322.

26-28—*Hilton Head Island, SC:* **Frontiers in Nutrition.** AMA Category 1 and AAFP prescribed credit. Contact Div. of Cont. Ed., MCG, Augusta 30912. PH:404/828-3967.

30-Oct. 4—*Augusta:* **Obstetrics and Gynecology.** Category 1 credit. Contact Div. of Cont. Ed., MCG, Augusta 30912. PH:404/828-3967.

Medical Student Section . . .

Georgia Resolution Gains Approval at National Meeting



Medical students from across the country attended the Interim Meeting of the American Medical Association/Medical Student Section in Hawaii, Nov. 30-Dec. 2, 1984. Georgia was well represented by its medical students.

Georgia was well represented at the AMA/MSS 1984 Interim Meeting held in Honolulu, Hawaii, November 30-December 2, 1984. Members of the delegation were: Aaron Davidson, MCG Delegate and editor of the MAG/MSS Newsletter; Jeff Davis, MCG Alternate Delegate; Leon Dent, Morehouse representative and AMA/MSS Delegate to the AMA House of Delegates; Mark Litwin, Emory Delegate and PULSE editor; Georges Maliha, State Leadership Conference Steering Committee member and Morehouse Delegate; Rhonda Meadows, Morehouse; Earl Mullis, member of Reference Committee B and Mercer Delegate; and Michael Williams, member of Rules Committee and Morehouse Alternate Delegate.

RESOLUTIONS approved in AMA/MSS debate include:

—Study of Sleep Deprivation in Med Student and Residency Programs
—Closer monitoring of graduates of unaccredited medical schools
—Changes in the *Extramural Electives Compendium* to help students in their selection of "off-campus" electives
—Creation of an AMA Ob-Gyn Journal
—Creation of a Long Range Planning Task Force in the MSS
—Asking for First Aid and CPR to be a part of medical education
—Cost Containment
—Limiting the term of AMA/MSS officers
—Asking for increased GSL Loan limits
—Information to medical students on malpractice
—Asking medical schools to subsidize student Hepatitis B Vaccination
—Advocation of Pass/Fail National Board Scores
—Creation of a new class of "transitional" drugs between OTC and prescription.

Also debated was a resolution from the Georgia Delegation calling for the creation and publication of a guide for residency selection to be distributed to medical students this spring. We are proud of Georgia's ease in having this measure approved and feel that this publication will benefit medical students and answer many questions about the Match.

Sunday afternoon, the MSS delegation met with the Georgia AMA Delegates for lunch and discussed some of the issues before the AMA House of Delegates before returning home to Georgia.

The convention was a great success for the Georgia MSS and it is hoped that further interest and greater involvement will be seen at the annual meeting in Chicago in June. The MSS Delegation appreciates the activities of the MAG, their financial support and serving as models for the medical students. The MSS looks forward to 1985 and will appreciate the support which MAG continues to give.

On behalf of the other delegates,

Aaron Davidson
Delegate, MCG

Physician's Recognition Award Recipients

LISTED BELOW *are those physicians in Georgia who have earned the AMA's Physician's Recognition Award (PRA) from January through March, 1985.*

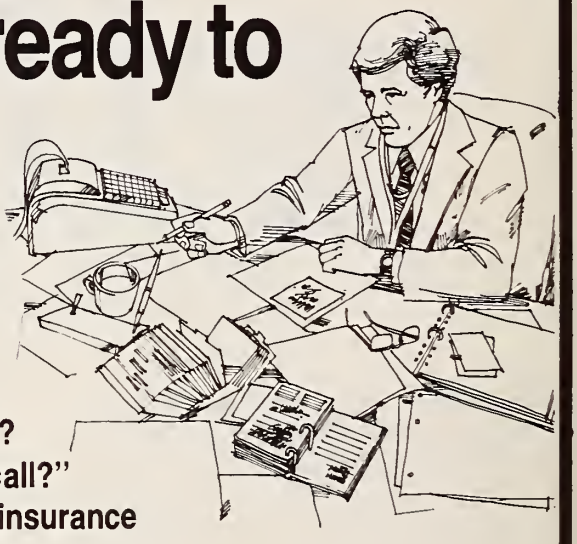
The award was established in 1969 "to recognize, encourage, and support physicians who participate regularly in continuing medical education and to emphasize the importance of developing more meaningful continuing medical education opportunities for physicians." A minimum of 150 credit hours of CME must be earned over a 3-year period to qualify for the Award. The hours may include such activities as conferences, residencies, teaching, writing, private reading, listening to cassettes, home study courses, consultation, and peer review; at least 60 of the hours, however, must be from formal CME programs sponsored or co-sponsored for Category I credit by organizations accredited for these activities.

The MAG House of Delegates has set a goal that all MAG members shall have received the PRA by 1985. We congratulate the following physicians who have distinguished themselves and their profession by their commitment to continuing education:

Richardo B. Akstein, Riverdale
Gabriel M. Alfonso, Milledgeville
Stephen C. Allen, Moultrie
Robert J. Alpern, Smyrna
Hortensia W. Alvarez, Milledgeville
Thomas S. Arnold, Augusta
Ramon P. Azahar, Milledgeville
William E. Berry, Athens
Ashok Bhoomkar, Atlanta
John F. Bigger, Augusta
Paul W. Black, Atlanta
Daniel S. Blumenthal, Atlanta
Donald L. Boyd, Albany
Joel M. Breman, Atlanta
David A. Burgess, Atlanta
Ernest N. Burson, Atlanta
Milton D. Byrd, Atlanta
Bernard J. Cahn, Atlanta
Jose C. Campa, Valdosta
Oscar B. Carlisle, Atlanta
Robert E.Chandlee, Marietta
John E. Cooke, Smyrna
Jerry Lee Cooper, Decatur
José F. Cordero, Atlanta
William O. Cornwell, Ft. Oglethorpe
Earl L. Creech, Valdosta
Eugene L. Crews, Smyrna
Robert W.Crow, Atlanta
Fred L. Daniel, Savannah
Eugene D. Davidson, Atlanta
Ervin D. DeLoach, Savannah
Howard C. Derrick, LaFayette
Lawrence J. Duane, Waycross
Christian M. Ezekwueche, Macon
Hossam E. Fadel, Augusta
David B. Fillingim, Savannah
Elliott R. Finger, Savannah
David Finkelman, Lithia Springs
José R. Flores, Milledgeville
Carol D. W. Flythe, Stone Mountain
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Luther G. Fortson, Marietta
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E. Rawson Griffin, Hinesville
Howard A. Griffin, Waycross
W. Arthur Guest, Tifton
Jefferson D. Hanks, Rome
Carl R. Hartrampf, Atlanta
James R. Hattaway, Albany
J. A. Hefferman, Savannah
Charles A. Henderson, Atlanta
Lovic W. Hobby, Atlanta
James A. Hotz, Albany
William E. Huger, Atlanta
Joe L.Hughes, East Point
John H. Hunt, Statesboro
Clarence M. Johnson, St. Simons Island
Otto B. Johnson, Dublin
Hee Chang Jung, Riverdale
Maurice J. Jurkiewicz, Atlanta
Thomas N. Kias, Athens
Michael H. Knautz, Valdosta
Dianne C. Leeb, Tucker
Alva H. Letton, Atlanta
Michael K. Levine, Atlanta
Grady E. Longino, Dublin
Malcolm M. Luxenberg, Augusta
Charles G. Magnan, Macon
Richard C. Mattison, Atlanta
Wallace D. Mays, Americus
Fayette M. McElhannon, Athens
William T. McLarty, Smyrna
Byron D. Minor, Decatur
Victor A. Moore, Augusta
A. Wendell Musser, Decatur
Thomas R. Nolan, East Point
Ui Ho Park, Dublin
Michael D. Paul, Augusta
Garland D. Perdue, Atlanta
David A. Piacente, Columbus
Chavalit Pongsomboon, Cordele
Morris M. Pulliam, Covington
James W. Purcell, Covington
Eyvin P. Rasmussen, Atlanta
Joe D. Rawlings, Thomasville
Kothapalli N. Reddy, Americus
John W. Richards, Augusta
John D. Richmond, Dalton
Lawrence E. Ruf, Savannah
John A. Rusca, Atlanta
Gil D. Saguiguit, Robins AFB
M. Aslam Sandvi, Dalton
John B. Savage, Augusta
William E. Schatten, Atlanta
Kamla J. Shah, Augusta
George W. Shannon, Columbus
Nehdi Sheikholeslam, LaFayette
Eloise B. Sherman, Savannah
Henry W. Smith, Swainsboro
James W. Smith, Manchester
Elson Lee So, Augusta
Paul Gregory Spottswood, Jesup
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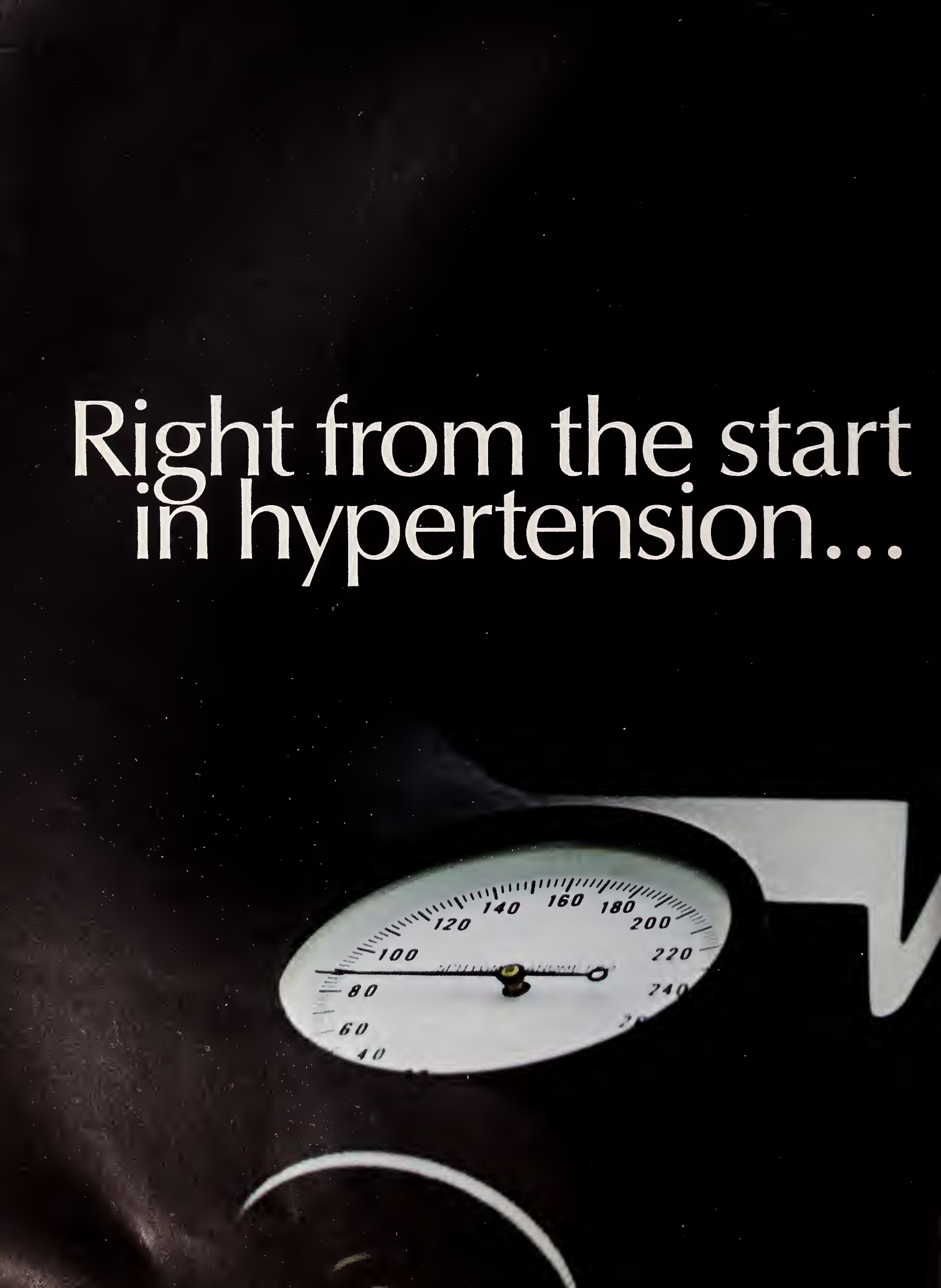
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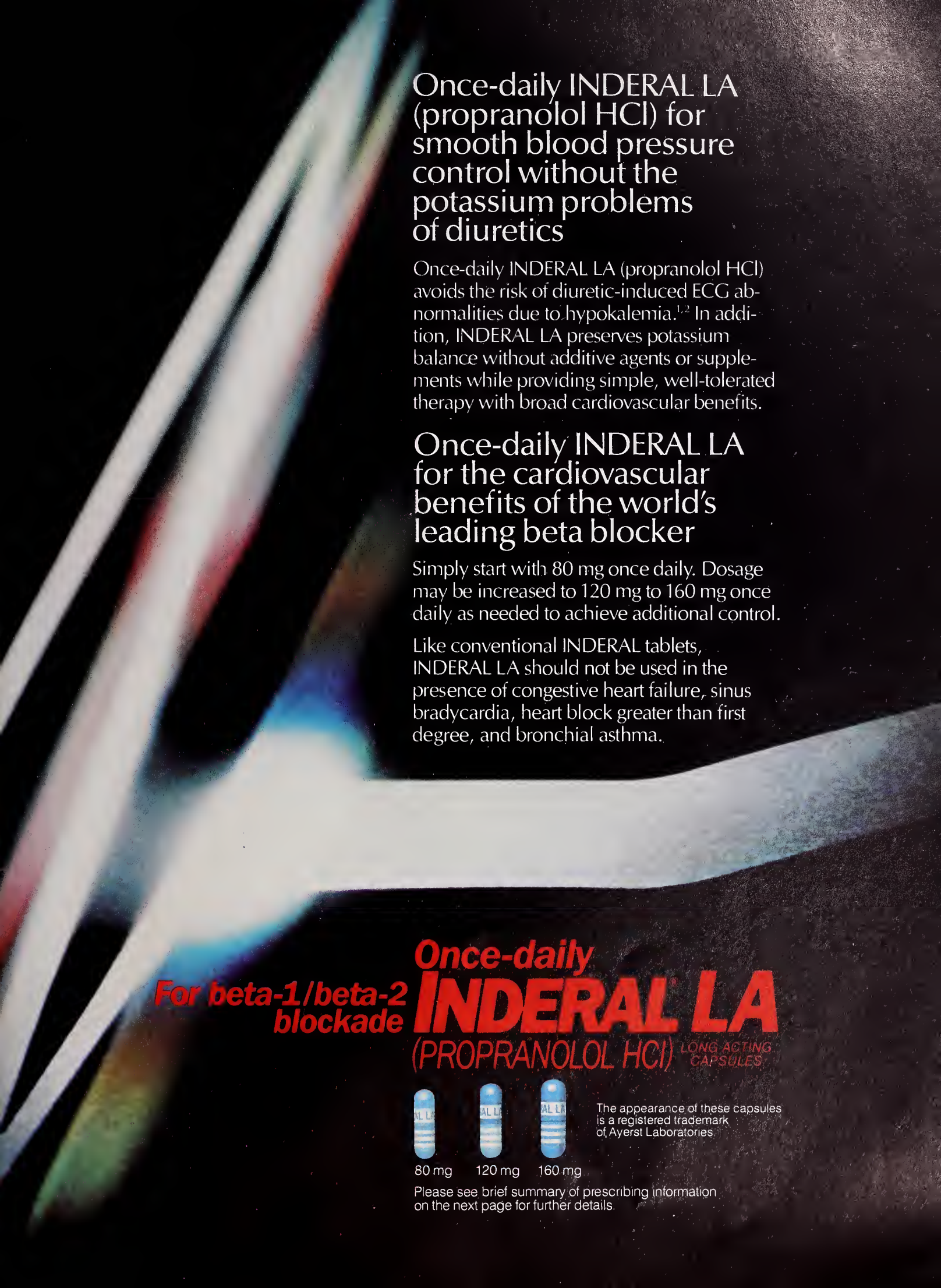
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J-4044 January 1984

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The mechanism of the antihypertensive effect of INDERAL has not been established. Among the factors that may be involved in contributing to the antihypertensive action are (1) decreased cardiac output, (2) inhibition of renin release by the kidneys, and (3) diminution of tonic sympathetic nerve outflow from vasomotor centers in the brain. Although total peripheral resistance may increase initially, it readjusts to or below the pretreatment level with chronic use. Effects on plasma volume appear to be minor and somewhat variable. INDERAL has been shown to cause a small increase in serum potassium concentration when used in the treatment of hypertensive patients.

In angina pectoris, propranolol generally reduces the oxygen requirement of the heart at any given level of effort by blocking the catecholamine-induced increases in the heart rate, systolic blood pressure, and the velocity and extent of myocardial contraction. Propranolol may increase oxygen requirements by increasing left ventricular fiber length, end diastolic pressure and systolic ejection period. The net physiologic effect of beta-adrenergic blockade is usually advantageous and is manifested during exercise by delayed onset of pain and increased work capacity.

In dosages greater than required for beta blockade, INDERAL also exerts a quinidine-like or anesthetic-like membrane action which affects the cardiac action potential. The significance of the membrane action in the treatment of arrhythmias is uncertain.

The mechanism of the antimigraine effect of propranolol has not been established. Beta-adrenergic receptors have been demonstrated in the pial vessels of the brain.

Beta receptor blockade can be useful in conditions in which, because of pathologic or functional changes, sympathetic activity is detrimental to the patient. But there are also situations in which sympathetic stimulation is vital. For example, in patients with severely damaged hearts, adequate ventricular function is maintained by virtue of sympathetic drive which should be preserved. In the presence of AV block, greater than first degree, beta blockade may prevent the necessary facilitating effect of sympathetic activity on conduction. Beta blockade results in bronchial constriction by interfering with adrenergic bronchodilator activity which should be preserved in patients subject to bronchospasm.

Propranolol is not significantly dialyzable.
INDICATIONS AND USAGE. Hypertension: INDERAL LA is indicated in the management of hypertension; it may be used alone or used in combination with other antihypertensive agents, particularly a thiazide diuretic. INDERAL LA is not indicated in the management of hypertensive emergencies.

Angina Pectoris Due to Coronary Atherosclerosis: INDERAL LA is indicated for the long-term management of patients with angina pectoris.

Migraine: INDERAL LA is indicated for the prophylaxis of common migraine headache. The efficacy of propranolol in the treatment of a migraine attack that has started has not been established and propranolol is not indicated for such use.

Hypertrophic Subaortic Stenosis: INDERAL LA is useful in the management of hypertrophic subaortic stenosis, especially for treatment of exertional or other stress-induced angina, palpitations, and syncope. INDERAL LA also improves exercise performance. The effectiveness of propranolol hydrochloride in this disease appears to be due to a reduction of the elevated outflow pressure gradient which is exacerbated by beta-receptor stimulation. Clinical improvement may be temporary.
CONTRAINDICATIONS. INDERAL is contraindicated in 1) cardiogenic shock; 2) sinus bradycardia and greater than first degree block; 3) bronchial asthma; 4) congestive heart failure (see WARNINGS) unless the failure is secondary to a tachyarrhythmia treatable with INDERAL.
WARNINGS. CARDIAC FAILURE: Sympathetic stimulation may be a vital component supporting circulatory function in patients with congestive heart failure, and its inhibition by beta blockade may precipitate more severe failure. Although beta blockers should be avoided in overt congestive heart failure, if necessary, they can be used with close follow-up in patients with a history of failure who are well compensated and are receiving digitalis and diuretics. Beta-adrenergic blocking agents do not abolish the inotropic action of digitalis on heart muscle.

IN PATIENTS WITHOUT A HISTORY OF HEART FAILURE, continued use of beta blockers can, in some cases, lead to cardiac failure. Therefore, at the first sign or symptom of heart failure, the patient should be digitalized and/or treated with diuretics, and the response observed closely, or INDERAL should be discontinued (gradually, if possible).

IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following abrupt discontinuance of INDERAL therapy. Therefore, when discontinuance of INDERAL is planned the dosage should be gradually reduced over at least a few weeks, and the patient should be cautioned against interruption or cessation of therapy without the physician's advice. If INDERAL therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute INDERAL therapy and take other measures appropriate for the management of unstable angina pectoris. Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease who are given propranolol for other indications.

Nonallergic Bronchospasm (e.g., chronic bronchitis, emphysema)— PATIENTS WITH BRONCHOSPASTIC DISEASES SHOULD IN GENERAL NOT RECEIVE BETA BLOCKERS. INDERAL should be administered with caution since it may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta receptors.

MAJOR SURGERY: The necessity or desirability of withdrawal of beta-blocking therapy prior to major surgery is controversial. It should be noted, however, that the impaired ability of the heart to respond to reflex adrenergic stimuli may augment the risks of general anesthesia and surgical procedures.

INDERAL (propranolol HCl), like other beta blockers, is a competitive inhibitor of beta-receptor agonists and its effects can be reversed by administration of such agents, e.g., dobutamine or isoproterenol. However, such patients may be subject to protracted severe hypotension. Difficulty in starting and maintaining the heartbeat has also been reported with beta blockers.

DIABETES AND HYPOGLYCEMIA: Beta-adrenergic blockade may prevent the appearance of certain premonitory signs and symptoms (pulse rate and pressure changes) of acute hypoglycemia in labile insulin-dependent diabetes. In these patients, it may be more difficult to adjust the dosage of insulin.

THYROTOXICOSIS: Beta blockade may mask certain clinical signs of hyperthyroidism. Therefore, abrupt withdrawal of propranolol may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm. Propranolol does not distort thyroid function tests.

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker. In one case this resulted after an initial dose of 5 mg propranolol.
PRECAUTIONS. *General:* Propranolol should be used with caution in patients with impaired hepatic or renal function. INDERAL (propranolol HCl) is not indicated for the treatment of hypertensive emergencies.

Beta adrenoreceptor blockade can cause reduction of intraocular pressure. Patients should be told that INDERAL may interfere with the glaucoma screening test. Withdrawal may lead to a return of increased intraocular pressure.

Clinical Laboratory Tests: Elevated blood urea levels in patients with severe heart disease, elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase.

DRUG INTERACTIONS: Patients receiving catecholamine-depleting drugs such as reserpine should be closely observed if INDERAL is administered. The added catecholamine-blocking action may produce an excessive reduction of resting sympathetic nervous activity which may result in hypotension, marked bradycardia, vertigo, syncopal attacks, or orthostatic hypotension.

Carcinogenesis, Mutagenesis, Impairment of Fertility: Long-term studies in animals have been conducted to evaluate toxic effects and carcinogenic potential. In 18-month studies in both rats and mice, employing doses up to 150 mg/kg/day, there was no evidence of significant drug-induced toxicity. There were no drug-related tumorigenic effects at any of the dosage levels. Reproductive studies in animals did not show any impairment of fertility that was attributable to the drug.

Pregnancy: Pregnancy Category C. INDERAL has been shown to be embryotoxic in animal studies at doses about 10 times greater than the maximum recommended human dose.

There are no adequate and well-controlled studies in pregnant women. INDERAL should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers: INDERAL is excreted in human milk. Caution should be exercised when INDERAL is administered to a nursing woman.

Pediatric Use: Safety and effectiveness in children have not been established.
ADVERSE REACTIONS. Most adverse effects have been mild and transient and have rarely required the withdrawal of therapy.

Cardiovascular: bradycardia; congestive heart failure; intensification of AV block; hypotension; paresthesia of hands; thrombocytopenic purpura; arterial insufficiency, usually of the Raynaud type.

Central Nervous System: lightheadedness; mental depression manifested by insomnia, lassitude, weakness, fatigue; reversible mental depression progressing to catatonia; visual disturbances; hallucinations; an acute reversible syndrome characterized by disorientation for time and place, short-term memory loss, emotional lability, slightly clouded sensorium, and decreased performance on neuropsychometrics.

Gastrointestinal: nausea, vomiting, epigastric distress, abdominal cramping, diarrhea, constipation, mesenteric arterial thrombosis, ischemic colitis.

Allergic: pharyngitis and agranulocytosis, erythematous rash, fever combined with aching and sore throat, laryngospasm and respiratory distress.

Respiratory: bronchospasm.

Hematologic: agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpura.

Auto-Immune: In extremely rare instances, systemic lupus erythematosus has been reported.

Miscellaneous: alopecia, LE-like reactions, psoriasiform rashes, dry eyes, male impotence, and Peyronie's disease have been reported rarely. Oculomucocutaneous reactions involving the skin, serous membranes and conjunctivae reported for a beta blocker (practolol) have not been associated with propranolol.
DOSAGE AND ADMINISTRATION. INDERAL LA provides propranolol hydrochloride in a sustained-release capsule for administration once daily. If patients are switched from INDERAL tablets to INDERAL LA capsules, care should be taken to assure that the desired therapeutic effect is maintained. INDERAL LA should not be considered a simple mg for mg substitute for INDERAL. INDERAL LA has different kinetics and produces lower blood levels. Retitration may be necessary especially to maintain effectiveness at the end of the 24-hour dosing interval.

HYPERTENSION—*Dosage must be individualized.* The usual initial dosage is 80 mg INDERAL LA once daily, whether used alone or added to a diuretic. The dosage may be increased to 120 mg once daily or higher until adequate blood pressure control is achieved. The usual maintenance dosage is 120 to 160 mg once daily. In some instances a dosage of 640 mg may be required. The time needed for full hypertensive response to a given dosage is variable and may range from a few days to several weeks.

ANGINA PECTORIS—*Dosage must be individualized.* Starting with 80 mg INDERAL LA once daily, dosage should be gradually increased at three to seven day intervals until optimum response is obtained. Although individual patients may respond at any dosage level, the average optimum dosage appears to be 160 mg once daily. In angina pectoris, the value and safety of dosage exceeding 320 mg per day have not been established.

If treatment is to be discontinued, reduce dosage gradually over a period of a few weeks (see WARNINGS).

MIGRAINE—*Dosage must be individualized.* The initial oral dose is 80 mg INDERAL LA once daily. The usual effective dose range is 160-240 mg once daily. The dosage may be increased gradually to achieve optimum migraine prophylaxis. If a satisfactory response is not obtained within four to six weeks after reaching the maximum dose, INDERAL LA therapy should be discontinued. It may be advisable to withdraw the drug gradually over a period of several weeks.

HYPERTROPHIC SUBAORTIC STENOSIS—80-160 mg INDERAL LA once daily.

PEDIATRIC DOSAGE—At this time the data on the use of the drug in this age group are too limited to permit adequate directions for use.

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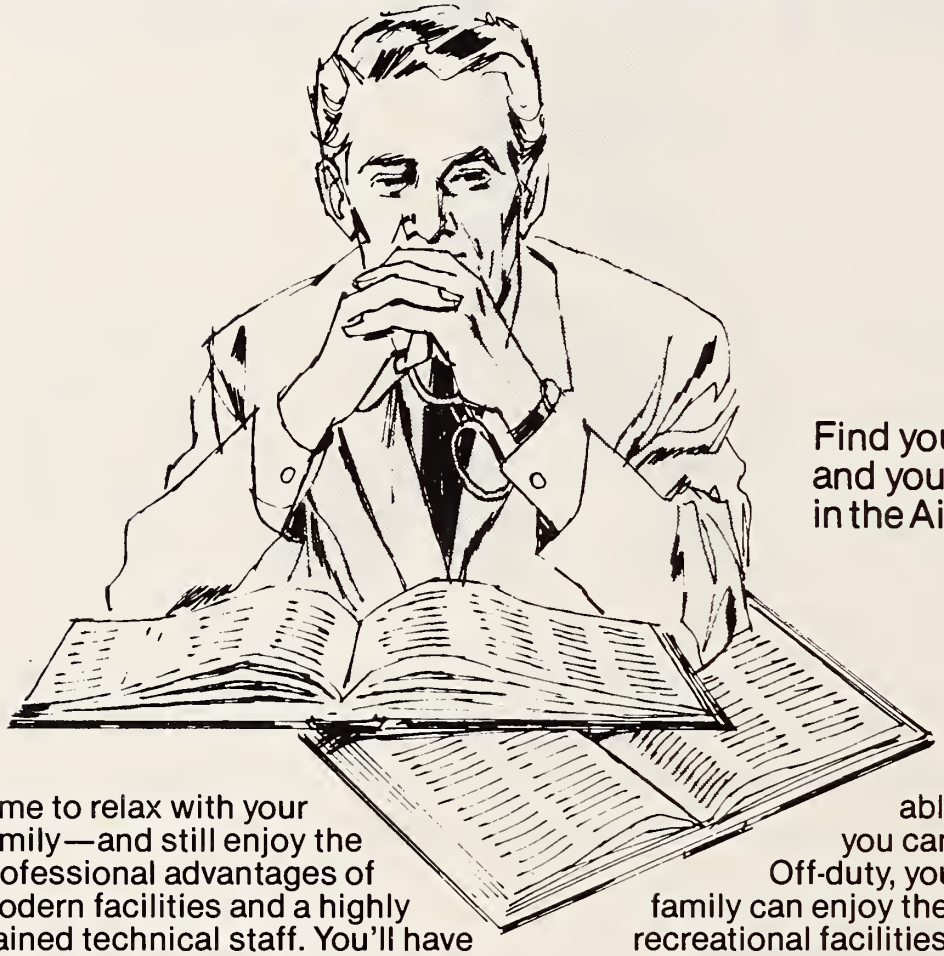
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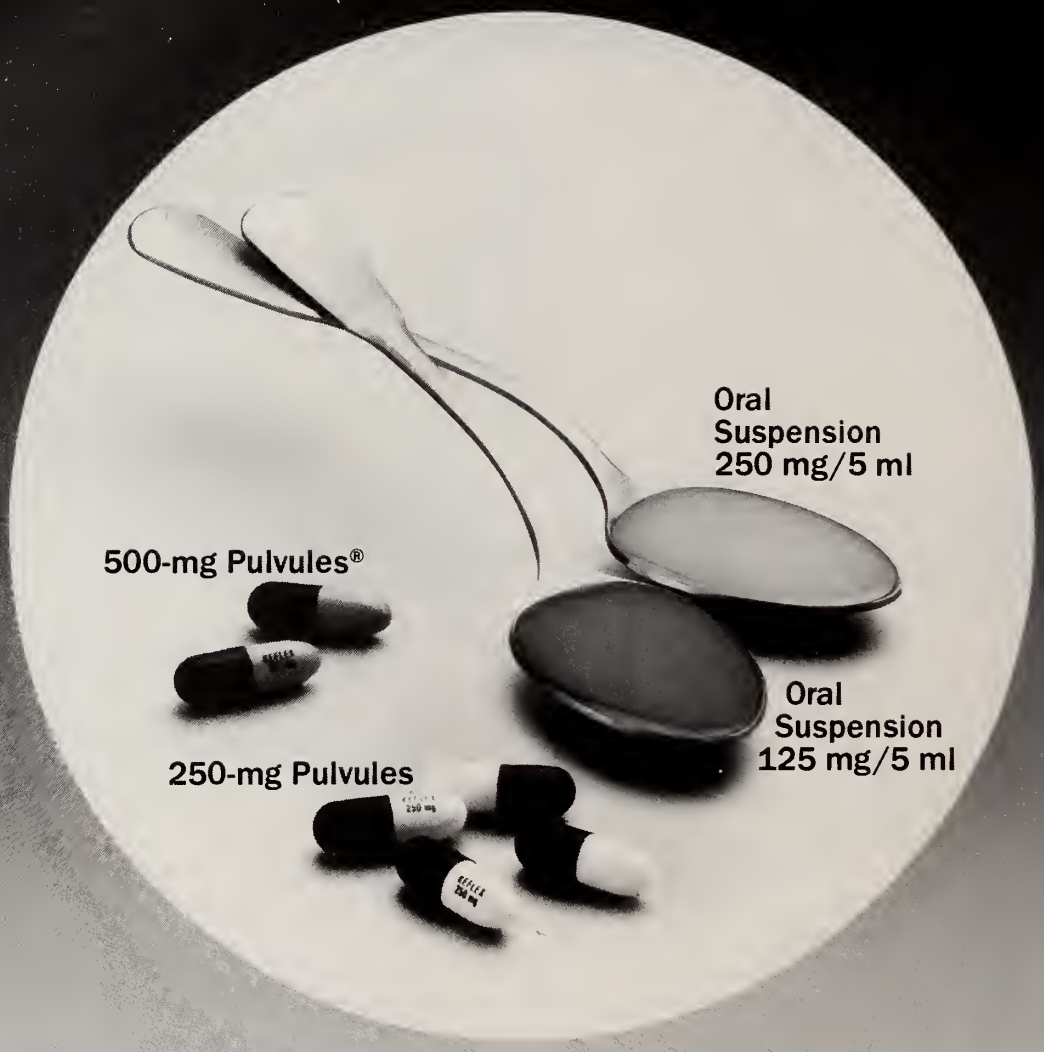
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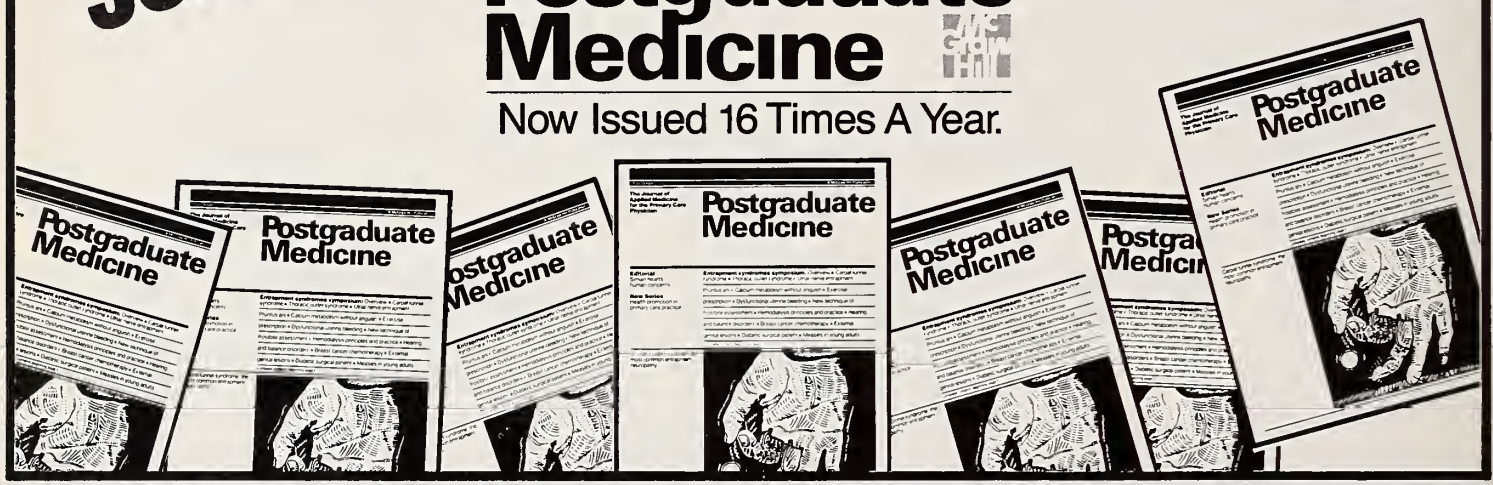
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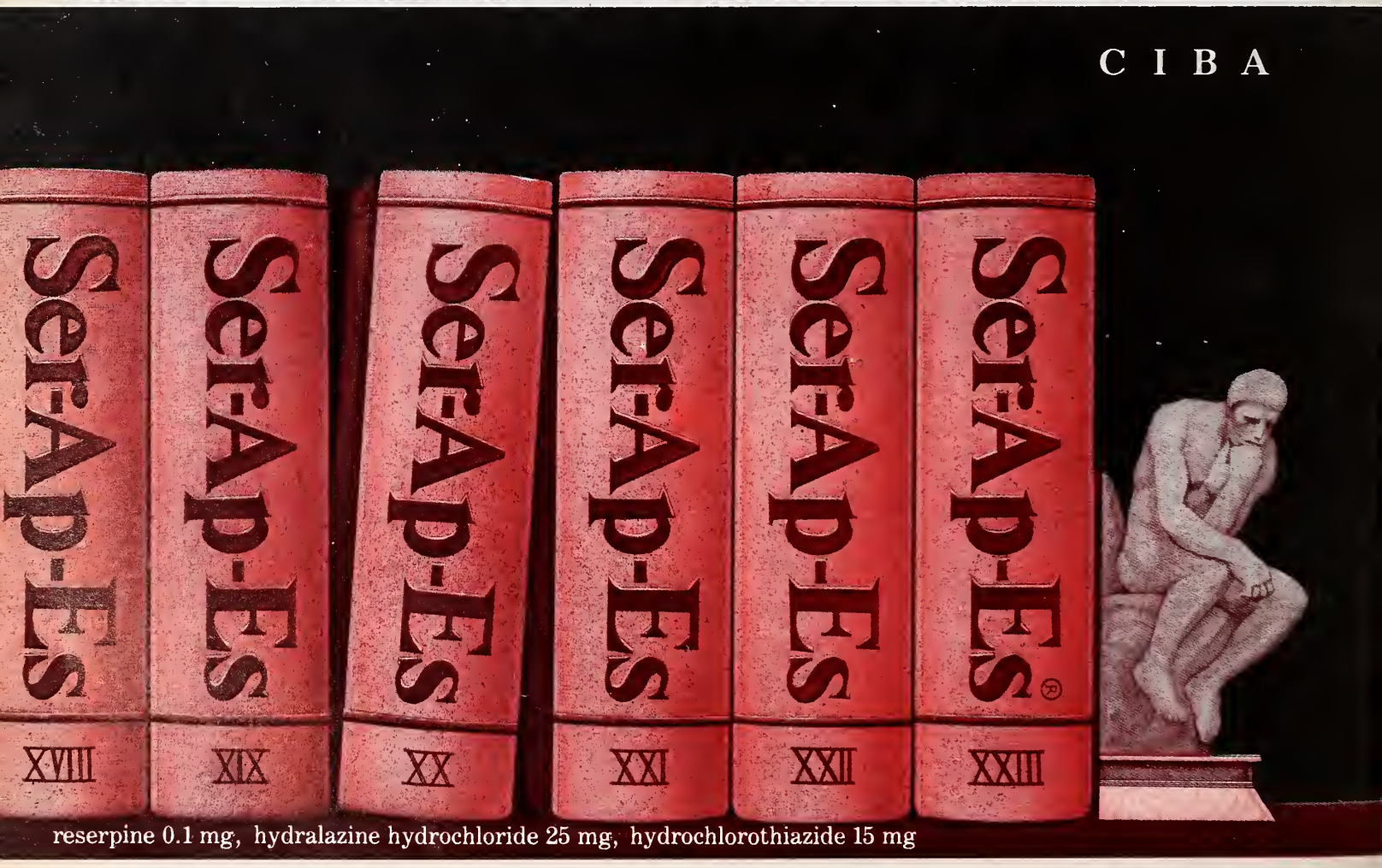
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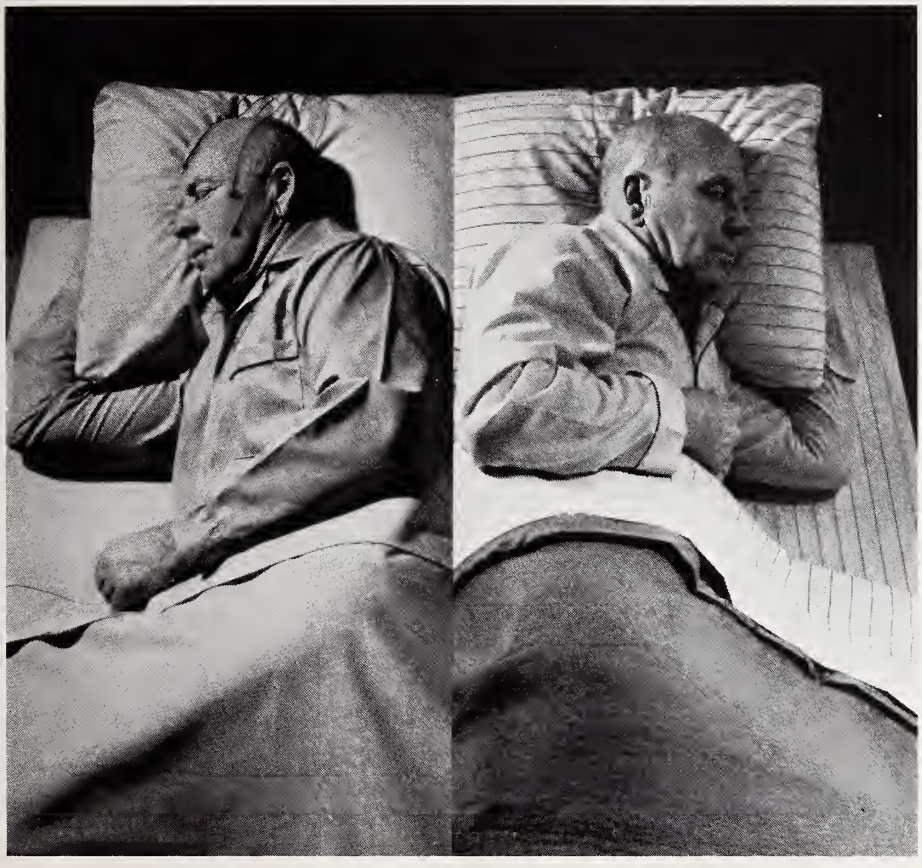
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Adverse Reactions: Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported: headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of leukopenia, granulocytopenia, sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations, and elevated SGOT, SGPT, total and direct bilirubins, and alkaline phosphatase; and paradoxical reactions, *e.g.*, excitement, stimulation and hyperactivity.

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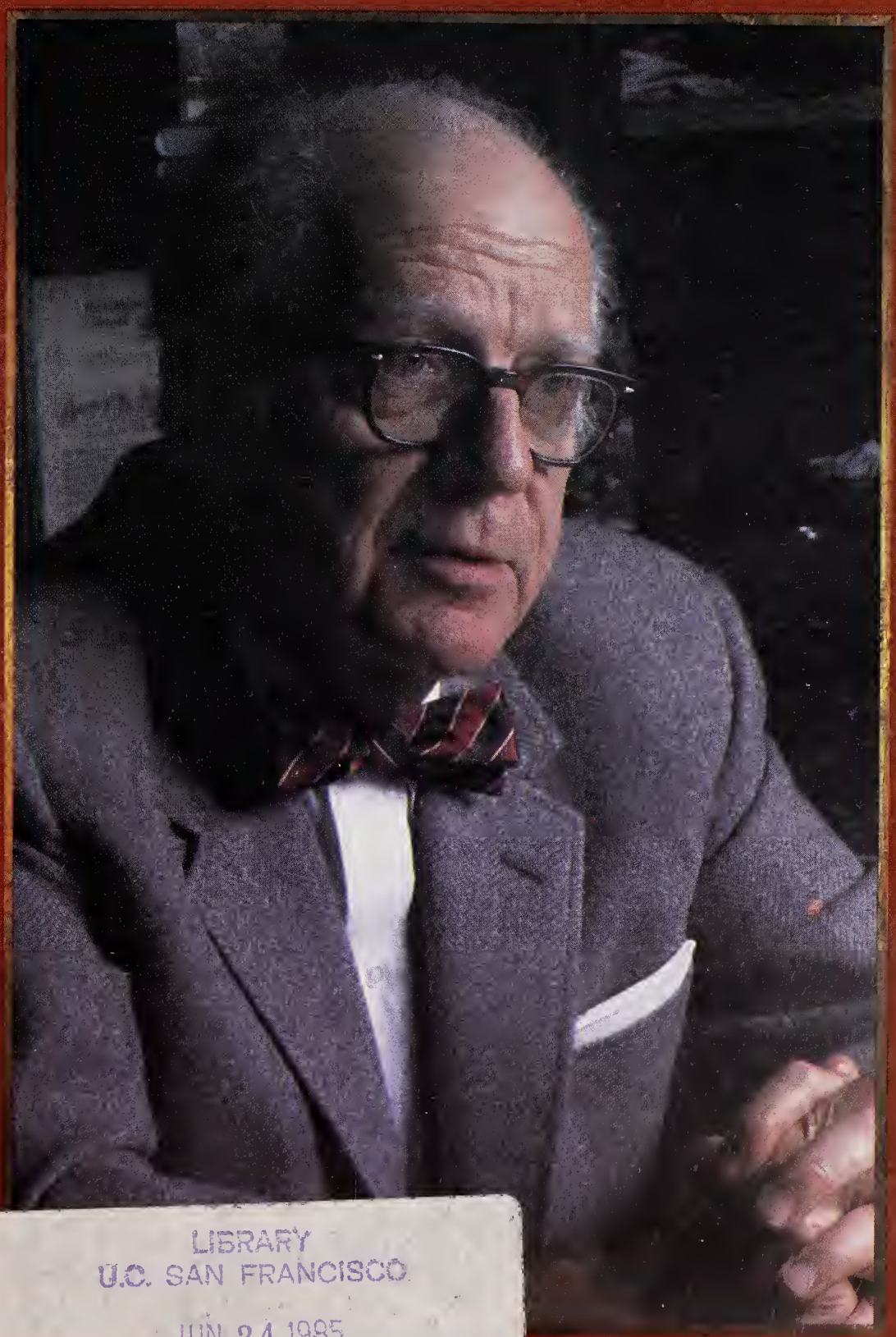


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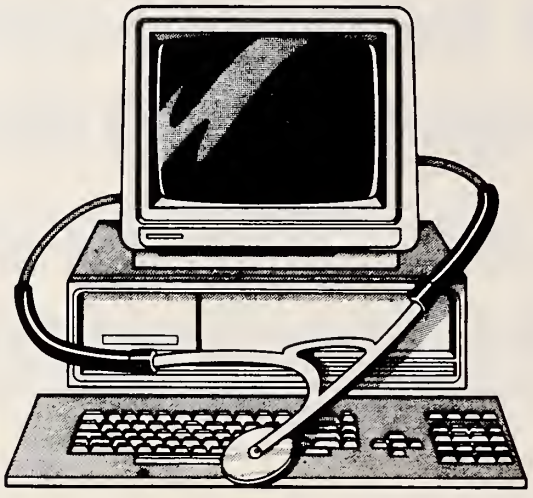
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Low incidence of side effects
CARDIZEM® (diltiazem HCl) produces an incidence of adverse reactions not greater than that reported with placebo therapy, thus contributing to the patient's sense of well-being.

*Cardizem is indicated in the treatment of angina pectoris due to coronary artery spasm and in the management of chronic stable angina (classic effort-associated angina) in patients who cannot tolerate therapy with beta-blockers and/or nitrates or who remain symptomatic despite adequate doses of these agents.

References:
1. Strauss WE, McIntyre KM, Parisi AF, et al: Safety and efficacy of diltiazem hydrochloride for the treatment of stable angina pectoris: Report of a cooperative clinical trial. Am J Cardiol 49:560-566, 1982.
2. Pool PE, Seagren SC, Bonanno JA, et al: The treatment of exercise-inducible chronic stable angina with diltiazem: Effect on treadmill exercise. Chest 78 (July suppl):234-238, 1980.

Reduces angina attack frequency*
42% to 46% decrease reported in multicenter study.[1]

Increases exercise tolerance*
In Bruce exercise test,[2] control patients averaged 8.0 minutes to onset of pain; Cardizem patients averaged 9.8 minutes ($P<.005$).

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(diltiazem HCl)

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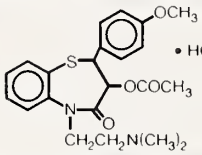
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PROFESSIONAL USE INFORMATION

cardizem®
(diltiazem HCl)
30 mg and 60 mg tablets

DESCRIPTION

CARDIZEM® (diltiazem hydrochloride) is a calcium ion influx inhibitor (slow channel blocker or calcium antagonist). Chemically, diltiazem hydrochloride is 1,5-Benzothiazepin-4(5H)one,3-(acetyloxy) -5-[2-(dimethylamino)ethyl]-2,3-dihydro-2-(4-methoxyphenyl)-, monohydrochloride,(+) -cis-. The chemical structure is:



Diltiazem hydrochloride is a white to off-white crystalline powder with a bitter taste. It is soluble in water, methanol, and chloroform. It has a molecular weight of 450.98. Each tablet of CARDIZEM contains either 30 mg or 60 mg diltiazem hydrochloride for oral administration.

CLINICAL PHARMACOLOGY

The therapeutic benefits achieved with CARDIZEM are believed to be related to its ability to inhibit the influx of calcium ions during membrane depolarization of cardiac and vascular smooth muscle.

Mechanisms of Action. Although precise mechanisms of its antianginal actions are still being delineated, CARDIZEM is believed to act in the following ways:

1. Angina Due to Coronary Artery Spasm: CARDIZEM has been shown to be a potent dilator of coronary arteries both epicardial and subendocardial. Spontaneous and ergonovine-induced coronary artery spasm are inhibited by CARDIZEM.
2. Exertional Angina: CARDIZEM has been shown to produce increases in exercise tolerance, probably due to its ability to reduce myocardial oxygen demand. This is accomplished via reductions in heart rate and systemic blood pressure at submaximal and maximal exercise work loads.

In animal models, diltiazem interferes with the slow inward (depolarizing) current in excitable tissue. It causes excitation-contraction uncoupling in various myocardial tissues without changes in the configuration of the action potential. Diltiazem produces relaxation of coronary vascular smooth muscle and dilation of both large and small coronary arteries at drug levels which cause little or no negative inotropic effect. The resultant increases in coronary blood flow (epicardial and subendocardial) occur in ischemic and nonischemic models and are accompanied by dose-dependent decreases in systemic blood pressure and decreases in peripheral resistance.

Hemodynamic and Electrophysiologic Effects. Like other calcium antagonists, diltiazem decreases sinoatrial and atrioventricular conduction in isolated tissues and has a negative inotropic effect in isolated preparations. In the intact animal, prolongation of the AH interval can be seen at higher doses.

In man, diltiazem prevents spontaneous and ergonovine-provoked coronary artery spasm. It causes a decrease in peripheral vascular resistance and a modest fall in blood pressure and, in exercise tolerance studies in patients with ischemic heart disease, reduces the heart rate-blood pressure product for any given work load. Studies to date, primarily in patients with good ventricular function, have not revealed evidence of a negative inotropic effect; cardiac output, ejection fraction, and left ventricular end diastolic pressure have not been affected. There are as yet few data on the interaction of diltiazem and beta-blockers. Resting heart rate is usually unchanged or slightly reduced by diltiazem.

Intravenous diltiazem in doses of 20 mg prolongs AH conduction time and AV node functional and effective refractory periods approximately 20%. In a study involving single oral doses of 300 mg of CARDIZEM in six normal volunteers, the average maximum PR prolongation was 14% with no instances of greater than first-degree AV block. Diltiazem-associated prolongation of the AH interval is not more pronounced in patients with first-degree heart block. In patients with sick sinus syndrome, diltiazem significantly prolongs sinus cycle length (up to 50% in some cases).

Chronic oral administration of CARDIZEM in doses of up to 240 mg/day has resulted in small increases in PR interval, but has not usually produced abnormal prolongation. There were, however, three instances of second-degree AV block and one instance of third-degree AV block in a group of 959 chronically treated patients.

Pharmacokinetics and Metabolism. Diltiazem is absorbed from the tablet formulation to about 80% of a reference capsule and is subject to an extensive first-pass effect, giving an absolute bioavailability (compared to intravenous dosing) of about 40%. CARDIZEM undergoes extensive hepatic metabolism in which 2% to 4% of the unchanged drug appears in the urine. In vitro binding studies show CARDIZEM is 70% to 80% bound to plasma proteins. Competitive ligand binding studies have also shown CARDIZEM binding is not altered by therapeutic concentrations of digoxin, hydrochlorothiazide, phenylbutazone, propranolol, salicylic acid, or warfarin. Single oral doses of 30 to 120 mg of CARDIZEM result in detectable plasma levels within 30 to 60 minutes and peak plasma levels two to three hours after drug administration. The plasma elimination half-life following single or multiple drug administration is approximately 3.5 hours. Desacetyl diltiazem is also present in the plasma at levels of 10% to 20% of the parent drug and is 25% to 50% as potent a coronary vasodilator as diltiazem. Therapeutic blood levels of CARDIZEM appear to be in the range of 50 to 200 ng/ml. There is a departure from dose-linearity when single doses above 60 mg are given; a 120-mg dose gave blood levels three times that of the 60-mg dose. There is no information about the effect of renal or hepatic impairment on excretion or metabolism of diltiazem.

INDICATIONS AND USAGE

1. **Angina Pectoris Due to Coronary Artery Spasm.** CARDIZEM is indicated in the treatment of angina pectoris due to coronary artery spasm. CARDIZEM has been shown effective in the treatment of spontaneous coronary artery spasm presenting as Prinzmetal's variant angina (resting angina with ST-segment elevation occurring during attacks).
2. **Chronic Stable Angina (Classic Effort-Associated Angina).** CARDIZEM is indicated in the management of chronic stable angina. CARDIZEM has been effective in controlled trials in reducing angina frequency and increasing exercise tolerance.

There are no controlled studies of the effectiveness of the concomitant use of diltiazem and beta-blockers or of the safety of this combination in patients with impaired ventricular function or conduction abnormalities.

CONTRAINDICATIONS

CARDIZEM is contraindicated in (1) patients with sick sinus syndrome except in the presence of a functioning ventricular pacemaker, (2) patients with second- or third-degree AV block except in the presence of a functioning ventricular pacemaker, and (3) patients with hypotension (less than 90 mm Hg systolic).

WARNINGS

1. **Cardiac Conduction.** CARDIZEM prolongs AV node refractory periods without significantly prolonging sinus node recovery time, except in patients with sick sinus syndrome. This effect may rarely result in abnormally slow heart rates (particularly in patients with sick sinus syndrome) or second- or third-degree AV block (six of 1243 patients for 0.48%). Concomitant use of diltiazem with beta-blockers or digitalis may result in additive effects on cardiac conduction. A patient with Prinzmetal's angina developed periods of asystole (2 to 5 seconds) after a single dose of 60 mg of diltiazem.
2. **Congestive Heart Failure.** Although diltiazem has a negative inotropic effect in isolated animal tissue preparations, hemodynamic studies in humans with normal ventricular function have not shown a reduction in cardiac index nor consistent negative effects on contractility (dp/dt). Experience with the use of CARDIZEM alone or in combination with beta-blockers in patients with impaired ventricular function is very limited. Caution should be exercised when using the drug in such patients.
3. **Hypotension.** Decreases in blood pressure associated with CARDIZEM therapy may occasionally result in symptomatic hypotension.
4. **Acute Hepatic Injury.** In rare instances, patients receiving CARDIZEM have exhibited reversible acute hepatic injury as evidenced by moderate to extreme elevations of liver enzymes. (See PRECAUTIONS and ADVERSE REACTIONS.)

PRECAUTIONS

General. CARDIZEM (diltiazem hydrochloride) is extensively metabolized by the liver and excreted by the kidneys and in bile. As with any new drug given over prolonged periods, laboratory parameters should be monitored at regular intervals. The drug should be used with caution in patients with impaired renal or hepatic function. In subacute and chronic dog and rat studies designed to produce toxicity, high doses of diltiazem were associated with hepatic damage. In special subacute hepatic studies, oral doses of 125 mg/kg and higher in rats were associated with histological changes in the liver which were reversible when the drug was discontinued. In dogs, doses of 20 mg/kg were also associated with hepatic changes; however, these changes were reversible with continued dosing.

Drug Interaction. Pharmacologic studies indicate that there may be additive effects in prolonging AV conduction when using beta-blockers or digitalis concomitantly with CARDIZEM. (See WARNINGS).

Controlled and uncontrolled domestic studies suggest that concomitant use of CARDIZEM and beta-blockers or digitalis is usually well tolerated. Available data are not sufficient, however, to predict the effects of concomitant treatment, particularly in patients with left ventricular dysfunction or cardiac conduction abnormalities. In healthy volunteers, diltiazem has been shown to increase serum digoxin levels up to 20%.

Carcinogenesis, Mutagenesis, Impairment of Fertility. A 24-month study in rats and a 21-month study in mice showed no evidence of carcinogenicity. There was also no mutagenic response in in vitro bacterial tests. No intrinsic effect on fertility was observed in rats.

Pregnancy. Category C. Reproduction studies have been conducted in mice, rats, and rabbits. Administration of doses ranging from five to ten times greater (on a mg/kg basis) than the daily recommended therapeutic dose has resulted in embryo and fetal lethality. These doses, in some studies, have been reported to cause skeletal abnormalities. In the perinatal/postnatal studies, there was some reduction in early individual pup weights and survival rates. There was an increased incidence of stillbirths at doses of 20 times the human dose or greater.

There are no well-controlled studies in pregnant women; therefore, use CARDIZEM in pregnant women only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers. It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, exercise caution when CARDIZEM is administered to a nursing woman if the drug's benefits are thought to outweigh its potential risks in this situation.

Pediatric Use. Safety and effectiveness in children have not been established.

ADVERSE REACTIONS

Serious adverse reactions have been rare in studies carried out to date, but it should be recognized that patients with impaired ventricular function and cardiac conduction abnormalities have usually been excluded.

In domestic placebo-controlled trials, the incidence of adverse reactions reported during CARDIZEM therapy was not greater than that reported during placebo therapy.

The following represent occurrences observed in clinical studies which can be at least reasonably associated with the pharmacology of calcium influx inhibition. In many cases, the relationship to CARDIZEM has not been established. The most common occurrences, as well as their frequency of presentation, are: edema (2.4%), headache (2.1%), nausea (1.9%), dizziness (1.5%), rash (1.3%), asthenia (1.2%), AV block (1.1%). In addition, the following events were reported infrequently (less than 1%) with the order of presentation corresponding to the relative frequency of occurrence.

Cardiovascular:	Flushing, arrhythmia, hypotension, bradycardia, palpitations, congestive heart failure, syncope.
Nervous System:	Paresthesia, nervousness, somnolence, tremor, insomnia, hallucinations, and amnesia.
Gastrointestinal:	Constipation, dyspepsia, diarrhea, vomiting, mild elevations of alkaline phosphatase, SGOT, SGPT, and LDH.
Dermatologic:	Pruritus, petechiae, urticaria, photosensitivity.
Other:	Polyuria, nocturia.

The following additional experiences have been noted:

A patient with Prinzmetal's angina experiencing episodes of vasospastic angina developed periods of transient asymptomatic asystole approximately five hours after receiving a single 60-mg dose of CARDIZEM.

The following postmarketing events have been reported infrequently in patients receiving CARDIZEM: erythema multiforme; leukopenia; and extreme elevations of alkaline phosphatase, SGOT, SGPT, LDH, and CPK. However, a definitive cause and effect between these events and CARDIZEM therapy is yet to be established.

OVERDOSAGE OR EXAGGERATED RESPONSE

Overdosage experience with oral diltiazem has been limited. Single oral doses of 300 mg of CARDIZEM have been well tolerated by healthy volunteers. In the event of overdosage or exaggerated response, appropriate supportive measures should be employed in addition to gastric lavage. The following measures may be considered:

Bradycardia	Administer atropine (0.60 to 1.0 mg). If there is no response to vagal blockade, administer isoproterenol cautiously.
High-Degree AV Block	Treat as for bradycardia above. Fixed high-degree AV block should be treated with cardiac pacing.
Cardiac Failure	Administer inotropic agents (isoproterenol, dopamine, or dobutamine) and diuretics.
Hypotension	Vasopressors (eg, dopamine or levarterenol bitartrate).

Actual treatment and dosage should depend on the severity of the clinical situation and the judgment and experience of the treating physician.

The oral LD_{50}'s in mice and rats range from 415 to 740 mg/kg and from 560 to 810 mg/kg, respectively. The intravenous LD_{50}'s in these species were 60 and 38 mg/kg, respectively. The oral LD_{50} in dogs is considered to be in excess of 50 mg/kg, while lethality was seen in monkeys at 360 mg/kg. The toxic dose in man is not known, but blood levels in excess of 800 ng/ml have not been associated with toxicity.

DOSAGE AND ADMINISTRATION

Exertional Angina Pectoris Due to Atherosclerotic Coronary Artery Disease or Angina Pectoris at Rest Due to Coronary Artery Spasm. Dosage must be adjusted to each patient's needs. Starting with 30 mg four times daily, before meals and at bedtime, dosage should be increased gradually (given in divided doses three or four times daily) at one- to two-day intervals until optimum response is obtained. Although individual patients may respond to any dosage level, the average optimum dosage range appears to be 180 to 240 mg/day. There are no available data concerning dosage requirements in patients with impaired renal or hepatic function. If the drug must be used in such patients, titration should be carried out with particular caution.

Concomitant Use With Other Antianginal Agents:

1. **Sublingual NTG** may be taken as required to abort acute anginal attacks during CARDIZEM therapy.
2. **Prophylactic Nitrate Therapy**—CARDIZEM may be safely coadministered with short- and long-acting nitrates, but there have been no controlled studies to evaluate the antianginal effectiveness of this combination.
3. **Beta-blockers.** (See WARNINGS and PRECAUTIONS.)

HOW SUPPLIED

Cardizem 30-mg tablets are supplied in bottles of 100 (NDC 0088-1771-47) and in Unit Dose Identification Paks of 100 (NDC 0088-1771-49). Each green tablet is engraved with MARION on one side and 1771 engraved on the other. CARDIZEM 60-mg scored tablets are supplied in bottles of 100 (NDC 0088-1772-47) and in Unit Dose Identification Paks of 100 (NDC 0088-1772-49). Each yellow tablet is engraved with MARION on one side and 1772 on the other.

Issued 4/1/84

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—President's Letter



Our Own IPA HMO

The Annual Session held in Savannah in April was a great meeting. It is always good to see the delegates from around the state and to share our problems and plans for the future. It was an especially happy occasion for me in that most members of my family were able to share in my installation as your president.

It is my firm belief that the Medical Association of Georgia is a strong and viable organization. I will endeavor to support it and serve you to the best of my ability for this coming year. I believe one of the momentous decisions ever made by MAG occurred at this Session. The House of Delegates voted overwhelmingly to implement a proposed Georgia Physicians Organization which would establish an IPA-HMO under the direction of and as a wholly owned subsidiary of MAG. I believe that this was a good decision and that it will potentially give organized medicine a much stronger position in the upcoming years when discussing and negotiating many aspects of contract medicine.

During the next few weeks, the MAG staff and I will be actively developing a format for implementation which will include the following steps:

1. The formation of a Steering Committee.
2. Evaluating several management firms and/or the possibility of doing our own management for detailed work.
3. Develop Boards of Directors for the HMO and IPA.
4. Begin to develop negotiations with other HMOs and PPSs.
5. Develop a capital raising project to enable us to carry this project forward.

It is my fervent hope that all of you will become knowledgeable and keep up with our progress in this area. Your interest and participation are essential. If you have expertise in this area or know of other members who could help, please contact MAG Headquarters, and we will make every effort to use your talents and energy.

Thank you again for the privilege of serving you this year, and I hope that I can see and talk to most of you during the next few months.

Wm. D Logan Jr.

William D. Logan, Jr., M.D.

Letters to the Editor . . .

April Issue

Dear Editor:

You always do a good job on the *Journal* but this issue was especially nice (the April issue).

Just wanted you to know. . . .

Best,
Linda Greene
Research Coordinator
for Andreas R. Gruentzig, M.D.
Emory University School
of Medicine

Dear Editor:

I just finished reading your April issue, ''The Auxiliary and the Child.'' I enjoyed the issue and thought it was a great idea that was well executed. And the cover was perfect.

Just thought you would like to know.

Cordially,
Geraldine Hutner
Managing Editor
Journal of the Medical
Society of New Jersey

Third Party Mandates?

Dear Sir:

[I recently received] a memorandum sent to all ''providers'' by Blue Cross/Blue Shield, General Motors Informed Choice Plan (ICP). It states emphatically and unequivocally that it is up to the *provider* to seek a predetermination of medical necessity.

I maintain that we have no contract with them, and therefore it is up to the patient, who is the insured, to see to these requirements. I shall refuse (and I suggest the MAG and county societies to do likewise) to seek precertification of medical necessity. I refuse to be responsible for *rationing* and *denying* medical care that *I* deem is necessary.

Is there any concerted effort possible for us, or is the only alternative the formation of a physicians' union? If so, so be it!

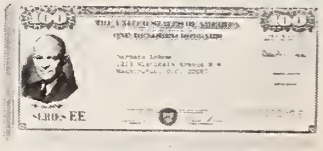
Sincerely,
E. Ernest Pierleoni, M.D.
Internist/Cardiologist
Homer





Bridalveil Fall, Yosemite National Park, California c. 1927. Photography by Ansel Adams. Courtesy of the Ansel Adams Publishing Rights Trust. All rights reserved.

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MEDICAL MEETING CALENDAR

JUNE

14-16 — *Hilton Head, SC:* **Georgia Society of Dermatologists Annual Meeting.** Category 1 credit. Contact Gerald Chotiner, MD, 3250 Howell Mill Rd., Atlanta 30327. PH:404/352-1730.

20-22 — *Atlanta:* **Contact Lens Seminar.** Category 1 credit. Contact Office of CME, Emory Univ. Sch. of Med., 1440 Clifton Rd., NE, Ste. 110, Atlanta 30322. PH:404/329-5695.

20-23 — *Sea Island:* **Georgia Chapter, Amer. Acad. of Pediatrics Spring Meeting.** Category 1 credit. Contact William C. Mankin, Exec. Secy., Ga. Chapter, AAP, 4059 Land O'Lakes Dr., NE, Atlanta 30342. PH:404/237-3922.

21-22 *Augusta:* **Flexible Fiberoptic Sigmoidoscopy for Primary Care Physicians.** Category 1 credit. Contact Div. of Con. Med. Ed., MCG, Augusta 30912. PH:404/828-3967.

JULY

11-13 — *Kiawah Island:* **Clinical Obstetrics — Recent Advances.** AMA Category 1 and AAFP prescribed credit. Contact Div. of Cont. Ed., MCG, Augusta 30912. PH:404/828-3967.

15-18 — *Hilton Head Island:* **Clinical Cardiology.** AMA Category 1 and AAFP prescribed credit. Contact Div. of Cont. Ed., MCG, Augusta 30912. PH:404/828-3967.

18-21 — *Kiawah Island:* **Pulmonary Diseases.** Category 1 credit. Contact Div. of Cont. Ed., MCG, Augusta 30912. PH:404/828-3967.

24-28 — *Kiawah Island:* **Critical Care Symposium.** AMA Category 1 and AAFP prescribed credit. Contact Div. of Cont. Ed., MCG, Augusta 30912. PH:404/828-3967.

29-31 — *Kiawah Island:* **Pediatric Update — 1985.** AMA Category 1 and AAFP prescribed credit. Contact Div. of Cont. Ed., MCG, Augusta 30912. PH:404/828-3967.

AUGUST

1-3 — *Kiawah Island:* **Clinical Genetics.** Category 1 credit. Contact Div. of Cont. Ed., MCG, Augusta 30912. PH:404/828-3967.

5-9 — *Hilton Head Island:* **Your Practice, Your Money, Your Family.** Category 1 credit. Contact Div. of Cont. Ed., MCG, Augusta 30912. PH:404/828-3967.

5-9 — *Atlanta:* **Board Review in Internal Medicine.** Category 1 credit. Contact Office of CME, Emory Univ. Sch. of Med., 1440 Clifton Rd., NE, Ste. 110, Atlanta 30322. PH:404/329-5695.

12-16 — *Kiawah Island, SC:* **Summer Imaging and Interventional Techniques.** Category 1 credit. Contact Office of CME, Emory Univ. Sch. of Med., 1440 Clifton Rd., NE, Ste. 110, Atlanta 30322. PH:404/329-5695.

15-18 — *St. Simons Island:* **Georgia Psychiatric Association Meeting.** Category 1 credit. Contact James Moffett, MAG, 938 Peachtree St., NE, Atlanta 30309. PH:404/876-7535 or 1-800-282-0224 (toll free in Ga.).

24-25 — *Callaway Gardens:* **Georgia Society of Anesthesiologists and Alabama Society of Anesthesiologists.** Category 1 credit. Contact William Hammonds, MD, Secy-Treas., GSA, Emory Univ. Hosp., Dept. of Anesth., 1364 Clifton Rd., NE, Atlanta 30322. PH:404/321-0111.

30-September 1 — *Sea Island:* **American College of Physicians.** Contact Malcolm Page, MD, MCG, Augusta 30912. PH:404/828-0211 Ext. 4018.

SEPTEMBER

5-8 — *Ponte Vedra, FL:* **Georgia Thoracic Society Tri-State Meeting.** Contact Edwin A. Kramer, Amer. Lung Assn., Ga. Div., 2452 Spring Rd., Smyrna 30080. PH:404/434-5864.

6-7 — *Sea Island:* **Georgia Society of Anesthesiologists and the South Carolina Society of Anesthesiologists.** Category 1 credit. Contact William Hammonds, MD, Secy-Treas., GSA, Emory Univ. Hosp., Dept of Anesth., 1364 Clifton Rd., NE, Atlanta 30322. PH:404/321-0111.

15-18 — *Sea Island:* **Georgia State OB/GYN Society Meeting.** Contact Ralph A. Tillman, MD, Pres., Ga. State OB/GYN Society, 5040 Snapfinger Woods Dr., Ste. 204, Decatur 30035. PH:404/981-1123.

18-20 — *Savannah:* **Neonatology — The Sick Newborn.** AMA Category 1 and AAFP prescribed credit. Contact Div. of Cont. Ed., Med. Coll. of Ga., Augusta 30912. PH:404/828-3967.

19-21 — *Sea Island:* **Georgia Surgical Society Meeting.** Category 1 credit. Contact William C. McGarity, MD, Secy-Treas., GSS, Emory Univ. Clinic, 1365 Clifton Rd., NE, Atlanta 30322. PH:404/321-0111 Ext. 3322.

26-28 — *Hilton Head Island:* **Frontiers in Nutrition.** AMA Category 1 and AAFP prescribed credit. Contact Div. of Cont. Ed., MCG, Augusta 30912. PH:404/828-3967.

OCTOBER

2-3 — *Atlanta:* **Georgia Chapter, Amer. Acad. of Pediatrics Fall Meeting.** Category 1 credit. Contact William C. Mankin, Exec. Secy., Ga. Chapter, AAP, 4059 Land O'Lakes Dr., NE, Atlanta 30342. PH:404/237-3922.

4 — *Atlanta:* **The Brain and The Heart: Clinical Interactions in Cardiovascular Disease.** Category 1 credit. Contact Office of CME, Emory Univ. Sch. of Med., 1440 Clifton Rd., NE, Ste. 110, Atlanta 30322. PH:404/329-5695.

11-13 — *Callaway Gardens:* **Georgia Gastroenterology Society.** Category 1 credit. Contact Theodore Hersh, MD, Secy.-Treas., GGS, 1365 Clifton Rd., NE, Atlanta 30322. PH:404/321-0111.

16-19 — *Hilton Head, S.C.:* **Recent Developments in the Clinical Management of Diabetes and Endocrine Disorders.** AMA Category 1 and AAFP Prescribed Credit. Contact Edwin D. Bransome, Jr., M.D., Dept. of Medicine, MCG, Augusta 30912. PH:404/828-3445.

17-18 — *Atlanta:* **Current Issues in Reproductive Health.** Category 1 credit. Contact Office of CME, Emory Univ. Sch. of Med., 1440 Clifton Rd., NE, Ste. 110, Atlanta 30322. PH:404/329-5695.

17-20 — *Sea Island:* **Georgia Orthopaedic Society.** Contact William C. Collins, MD, Secy-Treas., Ga. Orthopaedic Society, 993-C Johnson Ferry Rd., NE, Atlanta 30342. PH:404/255-4582.

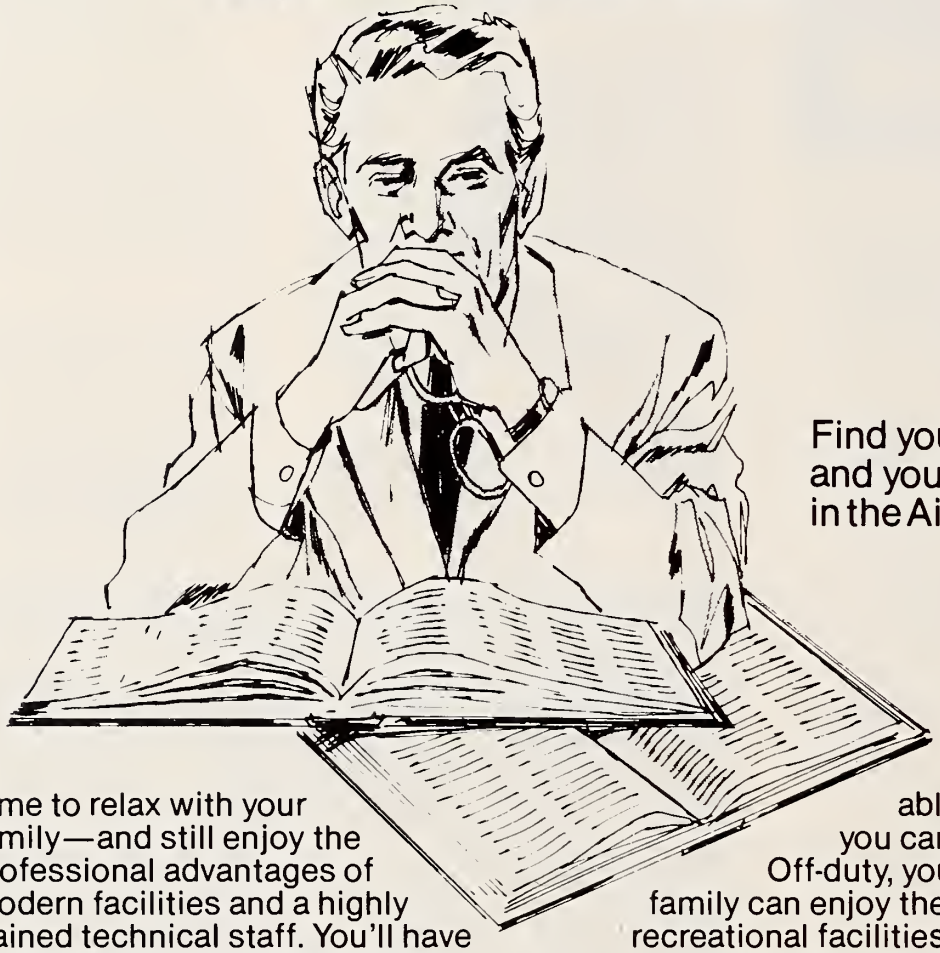
19-20 — *Atlanta:* **American Acad. of Facial Plastic & Reconstructive Surgery.** Contact AAFPRS, 1101 Vermont Ave., NW, Ste. 304, Washington, DC 20005. PH:202/842-4500.

20-24 — *Atlanta:* **Amer. Acad. of Otolaryngology — Head and Neck Surgery.** Contact AAOHNS, 1101 Vermont Ave., NW, Ste. 302, Washington, DC 20005. PH:202/289-4607.

23-25 — *Atlanta:* **Neuroradiology Update '85.** Category 1 credit. Contact Office of CME, Emory Univ. Sch. of Med., 1440 Clifton Rd., NE, Ste. 110, Atlanta 30322. PH:404/329-5695.

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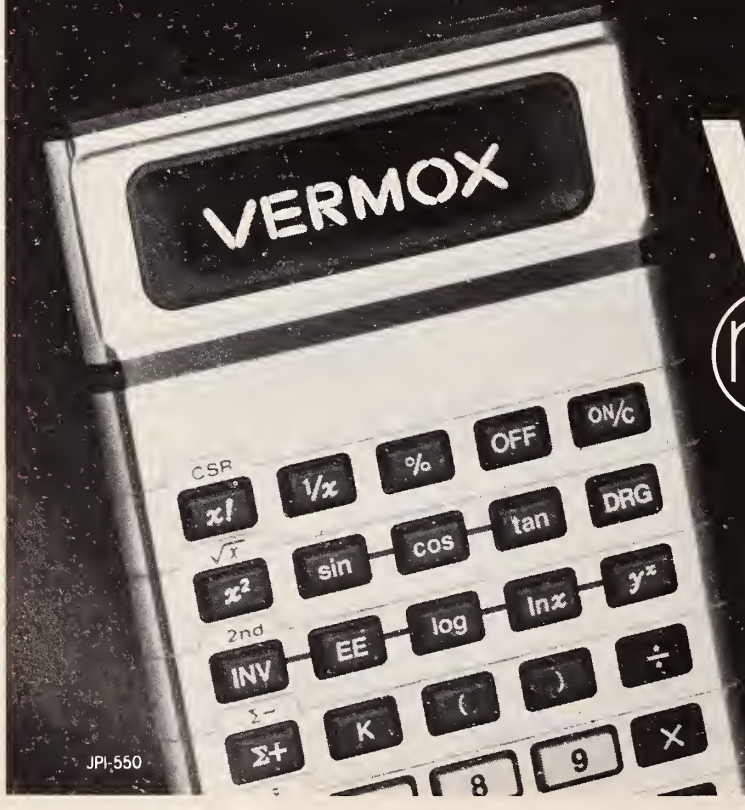
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BECAUSE SOMETIMES A 50 IS PREFERABLE.

Brief Summary of Prescribing Information
NORLESTRIN® (norethindrone acetate and ethinyl estradiol tablets, USP)

See section under **Special Notes on Administration and HOW SUPPLIED.**
Before prescribing, please see full prescribing information. A Brief Summary follows.

DESCRIPTION
Norlestrin Products are progestogen-estrogen combinations.

INDICATIONS AND USAGE
Norlestrin Products are indicated for the prevention of pregnancy in women who elect to use oral contraceptives as a method of contraception.

In clinical trials with Norlestrin 1/50 involving 25,983 therapy cycles, there was a pregnancy rate of 0.05 per 100 woman-years; in clinical trials with Norlestrin 2.5/50 involving 96,388 cycles, there was a pregnancy rate of 0.22 per 100 woman-years.

Dose-Related Risk of Thromboembolism from Oral Contraceptives: Studies have shown a positive association between the dose of estrogens in oral contraceptives and the risk of thromboembolism. It is prudent and in keeping with good principles of therapeutics to minimize exposure to estrogen. The oral contraceptive prescribed for any given patient should be that product which contains the least amount of estrogen that is compatible with an acceptable pregnancy rate and patient acceptance.

CONTRAINDICATIONS
1. Thrombophlebitis or thromboembolic disorders
2. A past history of deep-vein thrombophlebitis or thromboembolic disorders
3. Cerebral vascular or coronary artery disease
4. Known or suspected carcinoma of the breast
5. Known or suspected estrogen-dependent neoplasia
6. Undiagnosed abnormal genital bleeding
7. Known or suspected pregnancy (See WARNING No. 5)
8. Benign or malignant liver tumor which developed during the use of oral contraceptives or other estrogen-containing products.

WARNINGS

Cigarette smoking increases the risk of serious cardiovascular side effects from oral contraceptive use. The risk increases with age and with heavy smoking (15 or more cigarettes per day) and is quite marked in women over 35 years of age. Women who use oral contraceptives should be strongly advised not to smoke.

The use of oral contraceptives is associated with increased risk of several serious conditions including thromboembolism, stroke, myocardial infarction, hepatic adenoma, gallbladder disease, and hypertension. Practitioners prescribing oral contraceptives should be familiar with the following information relating to these risks.

1. *Thromboembolic Disorders and Other Vascular Problems.* An increased risk of thromboembolic and thrombotic disease associated with the use of oral contraceptives is well-established. Studies have demonstrated an increased risk of fatal and nonfatal venous thromboembolism and stroke, both hemorrhagic and thrombotic.

Cerebrovascular Disorders: In a collaborative study in women with and without predisposing causes, it was estimated that the risk of hemorrhagic stroke was 2.0 times greater in users than nonusers, and the risk of thrombotic stroke was 4.0 to 9.5 times greater.

Myocardial Infarction: An increased risk of myocardial infarction associated with oral contraceptives has been reported confirming a previously suspected association. These studies found that the greater the number of underlying risk factors (cigarette smoking, hypertension, hypercholesterolemia, obesity, diabetes, history of preeclamptic toxemia) for coronary artery disease, the higher the risk of developing myocardial infarction, regardless of whether the patient was an oral contraceptive user or not. Oral contraceptives, however, were found to be a clear additional risk factor.

It has been estimated that users who do not smoke (smoking is considered a major predisposing condition to myocardial infarction) are about twice as likely to have a fatal myocardial infarction as nonusers who do not smoke. Oral contraceptive users who are smokers have about a fivefold increased risk of fatal infarction compared to users who do not smoke, but about a tenfold to twelvefold increased risk compared to nonusers who do not smoke. The amount of smoking is also an important factor.

Risk of Dose: In an analysis of data, British investigators concluded that the risk of thromboembolism, including coronary thrombosis, is directly related to the dose of estrogen used in oral contraceptives; however, the quantity of estrogen may not be the sole factor involved.

Persistence of Risk: Two studies have suggested that an increased risk may persist for as long as 6 years after discontinuation of oral contraceptive use for cerebrovascular disease and 9 years for myocardial infarction. In addition, a prospective study suggested the persistence of risk for subarachnoid hemorrhage.

Estimate of Excess Mortality from Circulatory Diseases: The risk of diseases of the circulatory system is concentrated in older women, in those with a long duration of use, and in cigarette smokers.

A study of available data from a variety of sources concluded that the mortality associated with all methods of birth control is low and below that associated with childbirth, with the exception of oral contraceptives in women over 40 who smoke.

The risk of thromboembolic and thrombotic diseases associated with oral contraceptives increases with age after approximately age 30 and, for myocardial infarction, is further increased by hypertension, hypercholesterolemia, obesity, diabetes, or history of preeclamptic toxemia, and especially by cigarette smoking.

The physician and the patient should be alert to the earliest manifestations of thromboembolic and thrombotic disorders. Should any occur or be suspected, the drug should be discontinued immediately.

A fourfold to sixfold increased risk of postsurgery thromboembolic complications has been reported in users. If feasible, oral contraceptives should be discontinued at least four weeks before surgery of a type associated with an increased risk of thromboembolism or prolonged immobilization.

2. *Ocular Lesions.* Neuro-ocular lesions, such as optic neuritis or retinal thrombosis, have been associated with the use of oral contraceptives. Discontinue the oral contraceptive if there is unexplained sudden or gradual, partial, or complete loss of vision; onset of proptosis or diplopia; papilledema; or retinal vascular lesions.

3. *Carcinoma.* Long-term continuous administration of estrogen in certain animal species increases the frequency of carcinoma of the breast, cervix, vagina, and liver.

In humans, an increased risk of endometrial carcinoma associated with the prolonged use of exogenous estrogen in postmenopausal women has been reported. However, there is no evidence suggesting increased risk of endometrial cancer in users of conventional combination or progestogen-only oral contraceptives.

Studies found no evidence of increase in breast cancer in women taking oral contraceptives; however, an excess risk in users with documented benign breast disease was reported.

There is no confirmed evidence of an increased risk of cancer associated with oral contraceptives. Close clinical surveillance of users is, nevertheless, essential. In cases of undiagnosed persistent or recurrent abnormal vaginal bleeding, appropriate diagnostic measures should be taken to rule out malignancy. Women with a strong family history of breast cancer, or who have breast nodules, fibrocystic disease, or abnormal mammograms, should be monitored with particular care.

4. *Hepatic Tumors.* Benign hepatic adenomas have been found to be associated with oral contraceptives. Because hepatic adenomas may rupture and may cause death through intra-abdominal hemorrhage, they should be considered in women presenting abdominal pain and tenderness, abdominal mass, or shock.

A few cases of hepatocellular carcinoma have been reported in women taking oral contraceptives. The relationship of these drugs to this type of malignancy is not known at this time.

5. *Usage in or Immediately Preceding Pregnancy; Birth Defects in Offspring, and Malignancy in Female Offspring.* During early pregnancy, female sex hormones may seriously damage the offspring.

An increased risk of congenital anomalies, including heart defects and limb defects, has been reported with the use of oral contraceptives in pregnancy.

There is some evidence that triploidy and possible other types of polyploidy are increased among abortuses from women who become pregnant soon after ceasing oral contraceptives.

Pregnancy should be ruled out before continuing an oral contraceptive in any patient who has missed two consecutive menstrual periods. If the patient has not adhered to the schedule, the possibility of pregnancy should be considered at the time of the first missed period, and oral contraceptives should be withheld until pregnancy has been ruled out. If pregnancy is confirmed, the patient should be apprised of the potential risks to the fetus and the advisability of continuation of the pregnancy should be discussed.

Women who discontinue oral contraceptives with the intent of becoming pregnant should use an alternate form of contraception for a period of time before attempting to conceive.

Administration of progestogen-only or progestogen-estrogen combinations to induce withdrawal bleeding should not be used as a test of pregnancy.

6. *Gallbladder Disease.* Studies report an increased risk of surgically confirmed gallbladder disease in users of oral contraceptives.

7. *Carbohydrate and Lipid Metabolic Effects.* Because decreased glucose tolerance has been observed in a significant percentage of patients, prediabetic and diabetic patients should be carefully observed while receiving oral contraceptives.

An increase in triglycerides and total phospholipids has been observed.

8. *Elevated Blood Pressure.* An increase in blood pressure has been reported in patients receiving oral contraceptives. The prevalence in users increases with longer exposure. Age is also strongly correlated with development of hypertension. Women who previously have had hypertension during pregnancy may be more likely to develop elevation of blood pressure.

9. *Headache.* Onset or exacerbation of migraine or development of headache of a new pattern which is recurrent, persistent, or severe, requires discontinuation of oral contraceptives.

10. *Bleeding Irregularities.* Breakthrough bleeding, spotting, and amenorrhea are frequent reasons for patients discontinuing oral contraceptives. In breakthrough bleeding, nonfunctional causes should be borne in mind. In undiagnosed abnormal bleeding from the vagina, adequate diagnostic measures are indicated to rule out pregnancy or malignancy.

Women with a past history of oligomenorrhea or secondary amenorrhea, or young women without regular cycles should be advised that they may have a tendency to remain anovulatory or to become amenorrheic after discontinuation of oral contraceptives.

11. *Ectopic Pregnancy.* Ectopic as well as intrauterine pregnancy may occur in contraceptive failures.

12. *Breast-Feeding.* Oral contraceptives may interfere with lactation. Furthermore, a small fraction of the hormonal agents in oral contraceptives has been identified in the milk of mothers receiving these drugs.

PRECAUTIONS
1. A complete medical and family history should be taken prior to the initiation of oral contraceptives. The pretreatment and periodic physical examinations should include special reference to blood pressure, breasts, abdomen, and pelvic organs, including Papanicolaou smear and relevant laboratory tests. As a general rule, oral contraceptives should not be prescribed for longer than one year without another examination.
2. Preexisting uterine leiomyomata may increase in size.
3. Patients with a history of psychic depression should be carefully observed and the drug discontinued if depression recurs to a serious degree.
4. Oral contraceptives may cause fluid retention and should be prescribed with caution, and only with careful monitoring, in patients with conditions which might be aggravated.
5. Patients with a past history of jaundice during pregnancy have an increased risk of recurrence of jaundice. If jaundice develops, the medication should be discontinued.
6. Steroid hormones may be poorly metabolized and should be administered with caution in patients with impaired liver function.
7. Users may have disturbances in normal tryptophan metabolism, which may result in a relative pyridoxine deficiency.
8. Serum folate levels may be depressed.
9. The pathologist should be advised of oral contraceptive therapy when relevant specimens are submitted.
10. Certain endocrine and liver function tests and blood components may be affected. (a) Increased sulfobromophthalein retention. (b) Increased prothrombin and factors VII, VIII, IX, and X; decreased antithrombin 3; increased norepinephrine-induced platelet aggregability. (c) Increased thyroid-binding globulin (TBG) leading to increased circulating total thyroid hormone. (d) Decreased pregnanediol excretion. (e) Reduced response to metyrapone test.

Drug Interactions: Reduced efficacy and increased incidence of breakthrough bleeding have been associated with concomitant use of rifampin. A similar association has been suggested with barbiturates, phenylbutazone, phenytoin sodium, tetracycline, and ampicillin.

ADVERSE REACTIONS
An increased risk of the following serious adverse reactions has been associated with oral contraceptives: thrombophlebitis; pulmonary embolism; coronary thrombosis; cerebral thrombosis; cerebral hemorrhage; hypertension; gallbladder disease; benign hepatomas; congenital anomalies.

There is evidence of an association between the following conditions and the use of oral contraceptives, although additional confirmatory studies are needed: mesenteric thrombosis; neuro-ocular lesions, eg, retinal thrombosis and optic neuritis.

The following adverse reactions have been reported in patients receiving oral contraceptives and are believed to be drug related: nausea and/or vomiting, usually the most common adverse reactions, occur in approximately 10% or less of patients during the first cycle. Other reactions, as a general rule, are seen much less frequently or only occasionally: gastrointestinal symptoms; breakthrough bleeding; spotting; change in menstrual flow; dysmenorrhea; amenorrhea during and after treatment; temporary infertility after discontinuance of treatment; edema; chloasma or melasma; breast changes; change in weight; change in cervical erosion and cervical secretion; possible diminution in lactation when given immediately postpartum; cholestatic jaundice; migraine; increase in size of uterine leiomyomata; rash (allergic); mental depression; reduced tolerance to carbohydrates; vaginal candidiasis; change in corneal curvature; intolerance to contact lenses.

The following adverse reactions have been reported and the association has been neither confirmed nor refuted: premenstrual-like syndrome; cataracts; changes in libido; chorea; changes in appetite; cystitis-like syndrome; headache; nervousness; dizziness; hirsutism; loss of scalp hair; erythema multiforme; erythema nodosum; hemorrhagic eruption; vaginitis; porphyria.

Special Notes on Administration
Menstruation usually begins two or three days, but may begin as late as the fourth or fifth day, after discontinuing medication.

After several months on treatment, bleeding may be reduced to a point of virtual absence; reduced flow may be a result of medication and not indicative of pregnancy.

HOW SUPPLIED
Norlestrin [21] 1/50 is available in compacts each containing 21 tablets. Each tablet contains 1 mg of norethindrone acetate and 50 mcg of ethinyl estradiol. Available in packages of five compacts and packages of five refills.

Norlestrin [21] 2.5/50 is available in compacts each containing 21 tablets. Each tablet contains 2.5 mg of norethindrone acetate and 50 mcg of ethinyl estradiol. Available in packages of five compacts and packages of five refills.

Norlestrin [Fe] 1/50 is available in compacts each containing 21 yellow tablets and 7 brown tablets. Each yellow tablet contains 1 mg of norethindrone acetate and 50 mcg of ethinyl estradiol. Each brown tablet contains 75 mg of ferrous fumarate, USP. Available in packages of five compacts and packages of five refills.

Norlestrin [FE] 2.5/50 is available in compacts each containing 21 pink tablets and 7 brown tablets. Each pink tablet contains 2.5 mg of norethindrone acetate and 50 mcg of ethinyl estradiol. Each brown tablet contains 75 mg of ferrous fumarate, USP. Available in packages of five compacts and packages of five refills.

Norlestrin [28] 1/50 is available in compacts each containing 21 yellow tablets and 7 white inert tablets. Each yellow tablet contains 1 mg of norethindrone acetate and 50 mcg of ethinyl estradiol. Available in packages of five compacts and packages of five refills.

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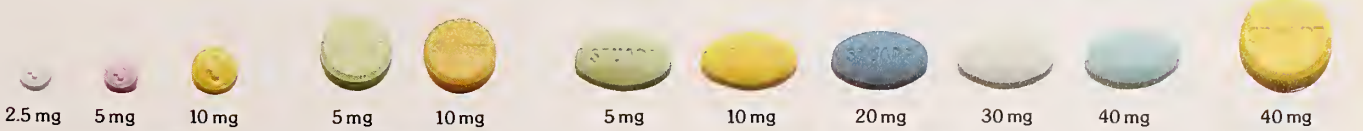


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See following page for brief summary of prescribing information.

SORBITRATE®
(ISOSORBIDE DINITRATE)

Please consult full prescribing information before use. A summary follows:

INDICATIONS AND USAGE: SORBITRATE (isosorbide dinitrate) is indicated for the treatment and prevention of angina pectoris. All dosage forms of isosorbide dinitrate may be used prophylactically to decrease frequency and severity of anginal attacks and can be expected to decrease the need for sublingual nitroglycerin.

The sublingual and chewable forms of the drug are indicated for acute prophylaxis of angina pectoris when taken a few minutes before situations likely to provoke anginal attacks. Because of a slower onset of effect, the oral forms of isosorbide dinitrate are not indicated for acute prophylaxis.

CONTRAINDICATIONS: SORBITRATE is contraindicated in patients who have shown purported hypersensitivity or idiosyncrasy to it or other nitrates or nitrites. Epinephrine and related compounds are ineffective in reversing the severe hypotensive events associated with overdose and are contraindicated in this situation.

WARNINGS: The benefits of SORBITRATE during the early days of an acute myocardial infarction have not been established. If one elects to use organic nitrates in early infarction, hemodynamic monitoring and frequent clinical assessment should be used because of the potential deleterious effects of hypotension.

PRECAUTIONS: General: Severe hypotensive response, particularly with upright posture, may occur with even small doses of SORBITRATE. The drug should therefore be used with caution in subjects who may have blood volume depletion from diuretic therapy or in subjects who have low systolic blood pressure (eg, below 90 mmHg). Paradoxical bradycardia and increased angina pectoris may accompany nitrate-induced hypotension. Nitrate therapy may aggravate the angina caused by hypertrophic cardiomyopathy.

Marked symptomatic, orthostatic hypotension has been reported when calcium channel blockers and organic nitrates were used in combination. Dose adjustment of either class of agents may be necessary.

Tolerance to this drug and cross-tolerance to other nitrates and nitrites may occur. Tolerance to the vascular and antianginal effects of isosorbide dinitrate or nitroglycerin has been demonstrated in clinical trials, experience through occupational exposure, and in isolated tissue experiments in the laboratory. The importance of tolerance to the appropriate use of isosorbide dinitrate in the management of patients with angina pectoris has not been determined. However, one clinical trial using treadmill exercise tolerance (as an end point) found an 8-hour duration of action of oral isosorbide dinitrate following the first dose (after a 2-week placebo washout) and only a 2-hour duration of effect of the same dose after 1 week of repetitive dosing at conventional dosing intervals. On the other hand, several trials have been able to differentiate isosorbide dinitrate from placebo after 4 weeks of therapy and, in open trials, an effect seems detectable for as long as several months.

Tolerance clearly occurs in industrial workers continuously exposed to nitroglycerin. Moreover, physical dependence also occurs since chest pain, acute myocardial infarction, and even sudden death have occurred during temporary withdrawal of nitroglycerin from the workers. In clinical trials in angina patients, there are reports of anginal attacks being more easily provoked and of rebound in the hemodynamic effects soon after nitrate withdrawal. The relative importance of these observations to the routine, clinical use of isosorbide dinitrate is not known. However, it seems prudent to gradually withdraw patients from isosorbide dinitrate when the therapy is being terminated, rather than stopping the drug abruptly.

Information for Patients: Headache may occur during initial therapy with SORBITRATE. Headache is usually relieved by the use of standard headache remedies or by lowering the dose and tends to disappear after the first week or two of use.

Drug Interactions: Alcohol may enhance any marked sensitivity to the hypotensive effect of nitrates.

Isosorbide dinitrate acts directly on vascular smooth muscle; therefore, any other agent that depends on vascular smooth muscle as the final common path can be expected to have decreased or increased effect depending on the agent.

Carcinogenesis, Mutagenesis, Impairment of Fertility: No long-term studies in animals have been performed to evaluate the carcinogenic potential of this drug. A modified two-litter reproduction study in rats fed isosorbide dinitrate at 25 or 100 mg/kg/day did not reveal any effects on fertility or gestation or any remarkable gross pathology in any parent or offspring fed isosorbide dinitrate as compared with rats fed a basal-controlled diet.

Pregnancy Category C: Isosorbide dinitrate has been shown to cause a dose-related increase in embryotoxicity (increase in mummified pups) in rabbits at oral doses 35 and 150 times the maximum recommended human daily dose. There are no adequate and well-controlled studies in pregnant women. SORBITRATE should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers: It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when SORBITRATE is administered to a nursing woman.

Pediatric Use: The safety and effectiveness of SORBITRATE in children has not been established.

ADVERSE REACTIONS: Adverse reactions, particularly headache and hypotension, are dose-related. In clinical trials at various doses, the following have been observed:

Headache is the most common (reported incidence varies widely, apparently being dose-related, with an average occurrence of about 25%) adverse reaction and may be severe and persistent. Cutaneous vasodilation with flushing may occur. Transient episodes of dizziness and weakness, as well as other signs of cerebral ischemia associated with postural hypotension, may occasionally develop (the incidence of reported symptomatic hypotension ranges from 2% to 36%). An occasional individual will exhibit marked sensitivity to the hypotensive effects of nitrates and severe responses (nausea, vomiting, weakness, restlessness, pallor, perspiration, and collapse) may occur even with the usual therapeutic dose. Drug rash and/or exfoliative dermatitis may occasionally occur. Nausea and vomiting appear to be uncommon. Case reports of clinically significant methemoglobinemia are rare at conventional doses of organic nitrates. The formation of methemoglobin is dose-related and, in the case of genetic abnormalities of hemoglobin that favor methemoglobin formation, even conventional doses of organic nitrate could produce harmful concentrations of methemoglobin.

DOSAGE AND ADMINISTRATION: For the treatment of angina pectoris, the usual starting dose for sublingual SORBITRATE is 2.5 to 5 mg; for chewable tablets, 5 mg; for oral (swallowed) tablets, 5 to 20 mg; and for controlled-release forms, 40 mg.

SORBITRATE should be titrated upward until angina is relieved or side effects limit the dose. In ambulatory patients, the magnitude of the incremental dose increase should be guided by measurements of standing blood pressure.

The initial dosage of sublingual or chewable SORBITRATE for prophylactic therapy in angina pectoris patients is generally 5 or 10 mg every 2 to 3 hours. Adequate controlled clinical studies demonstrating the effectiveness of chronic maintenance therapy with these dosage forms have not been reported.

SORBITRATE in oral doses of 10 to 40 mg given every 6 hours or in oral controlled-release doses of 40 to 80 mg given every 8 to 12 hours is generally recommended. The extent to which development of tolerance should modify the dosage program has not been defined. *The oral controlled-release forms of isosorbide dinitrate should not be chewed.*

DOSAGE FORMS AVAILABLE: Sublingual Tablets (2.5, 5, 10 mg); Chewable Tablets (5, 10 mg); Oral Tablets (5, 10, 20, 30, 40 mg); Sustained Action Tablets (40 mg).

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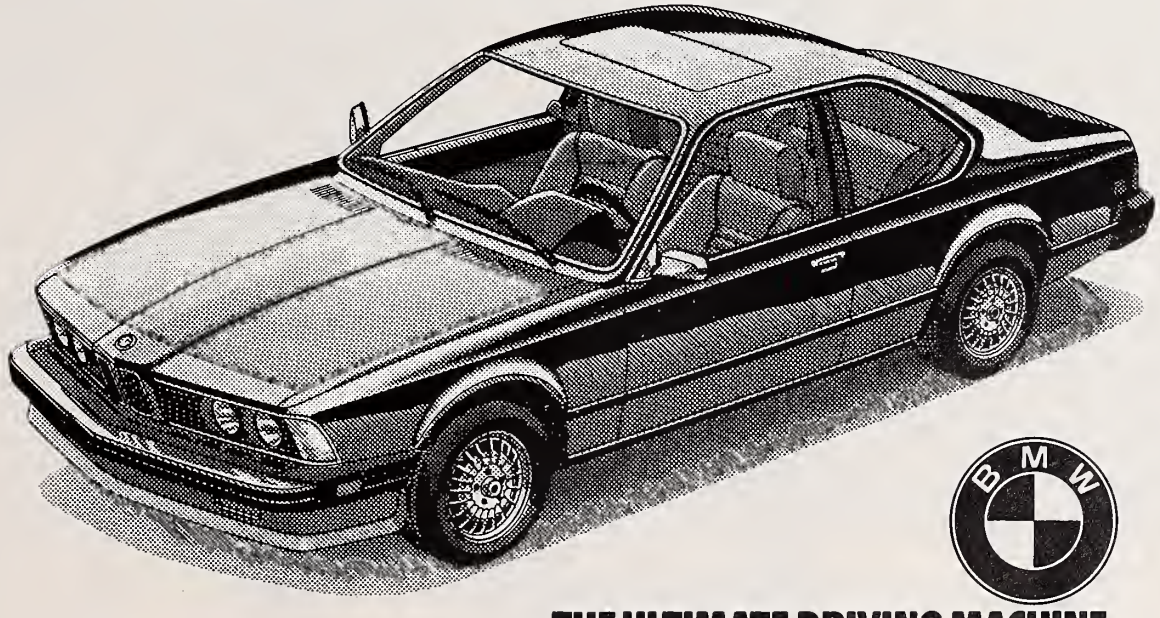
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Reminiscences of Harrison L. Rogers, Jr.

F. William Dowda, M.D.

When I first met Harrison Lockhart Rogers, Jr., (alias Jack), it was in the summer of 1942, shortly after the onset of World War II. I was fresh from the country and was duly impressed when Jack rode up in a red Buick convertible filled with his friends Jack Proffitt, John Boyle, Chandler Watson, Grady Longino, and Lester Forbes.

I was equally impressed by the fact that Jack dared to drink a beer on Emory Campus in the middle of the afternoon since such an activity was strictly forbidden in those days. We were in the middle of changing times, however, and although I pledged Chi Phi (to which Jack already belonged), our paths soon parted. Emory was converted largely to an Army and Navy training center where I stayed, and others went off to war, which Harrison Rogers did — eventually ending up in Europe and having a distinguished career as a Counter Intelligence Corp Lieutenant.

After the war, "Jack" came back to Emory and finished medical school. I was away at the time, initially in Boston and St. Louis and then to Japan during the Korean conflict. Jack and his lovely wife, Jean, made frequent visits to my parents' house in Smyrna to bolster their morale. They (as well as I) were eternally grateful for his solicitude to them.

We both eventually finished our training and obtained our Boards and returned to Atlanta to practice. Besides being a surgeon of consumate skill, that love and affection which he



As Speaker of the AMA House of Delegates, Harrison Rogers has represented the concerns and interests of patients and doctors in the political arena.

Dr. Dowda practices internal medicine. Send reprint requests to him at 490 Peachtree St., Atlanta, GA 30308.



Harrison Rogers' record of effective advocacy for both patients and organized medicine assures his capability to assume the responsibilities as President of the AMA at one of the most troubled times in medicine's history.

showed to my parents showed through in the care of his patients, and his practice grew and flourished. He recognized early on the enormous benefit to both the patient and the doctor from this arrangement of shared affection, coupled with the dispensing of skill that was appropriately given and fairly priced. He also recognized the growing economic and political threats to this very system. Hence, he became involved in medical politics and rose from Delegate to the MAG House of Delegates to Speaker of that same body and then on to Delegate of the AMA House and Speaker of that body. Last year, he was elected Presient-Elect of the AMA by unanimous acclamation of the AMA House of Delegates. He assumes the Presidency at one of the most troubled times in medicine's history — a time in which medicine is under attack by government, business, and, yes, even those patients whom medicine has served so well and so skillfully in the past.

I am sure he will bring to the AMA Presidency the same love and affection which he has shown my parents and his patients and additionally will bring skill to the job that will benefit us all — patient and doctor alike. ■

A Man Named Jack

Frank L. Wilson, Jr., M.D.

Jack was born on October 25, 1923, in Cumberland, Maryland, as Harrison Lockhart Rogers, Jr., a name he only used for official records until 1952. To everyone who grew up with him, and knew him prior to that time, it was "Jack" Rogers. Most never knew he had another name.

At an early age, he was uprooted from the Maryland and West Virginia area and moved to Atlanta where he spent most of the next 28 years, living in the Virginia Highlands/Morningside neighborhood. Jack started school at Samuel Inman grade school just as the Great Depression of 1929 descended upon the nation, and this certainly affected his thinking. He later attended O'Keefe Junior High. He was raised in a nice middle class suburb, and although he was not exactly overindulged, he never had to pick cotton to survive.

Although he was never a "goody-goody," he certainly was not a juvenile delinquent. If he ever got into any significant trouble, I never knew about it. Being three years younger and raised in the same neighborhood, I only observed him from a distance as one of "the big boys" in the neighborhood and knew he did not know that I was alive. He had lots of black hair, wore saddle oxford shoes, and drove a black convertible, just as Mickey Rooney did when he played Andy Hardy in the movies. Needless to say, the younger boys were in absolute awe at such a sight. Why, it was rumored that even though he was only 16 years old, he *looked* so old that he could buy beer with no questions asked!



Born "Harrison Lockhart Rogers, Jr.," everyone who grew up with him knew him as "Jack." At an early age, he moved from Maryland to Atlanta where he spent most of the next 28 years living in the Virginia Highlands/Morningside area.

Dr. Wilson practices general surgery at 35 Collier Rd., NW, Atlanta, GA 30309.

When he had reached the acme of social status at Boys High School, he was ready to tackle college, so it was off to Emory University in 1941 (just a couple of miles from home — the way the crow flies), so his mother could keep a pretty close eye on him. During his first quarter, Pearl Harbor was bombed and now came the Great War. This was almost too much, childhood during the Depression and now in young adulthood the greatest war the world had ever known. Being a true flag-waving American boy, he accepted the call to the colors and enlisted in the Army (he probably would rather have been in the Navy, but he wore glasses, so the Army it was). Initially, he was a medic. He went to the University of Pittsburgh for Army training and then to Officers Candidate School. From there, as a Second Lieutenant in Army Intelligence, he went off to Europe, where he stayed until the end of the War, finishing up in Austria.

Once released, it was back home and into pre-Med at Emory. At that time, it seemed as if everyone in college was pre-Med, so the competition was fierce. Jack worked hard and was able to start medical school at Emory in 1948. There were four boys from the Morningside neighborhood in the class which started in 1948: Jack, Newt Turk, John Ward, and me. We carpooled together — a necessity in those days since not everyone owned a car. We survived the next 4 eventful years, although as all who go through medical school know, there are many anxious moments. Jack remained cool and calm (at least outwardly) and always had his head on straight.

Over the years of our acquaintance, and it has been close for most of this time, I do not ever remember Jack using a profane word or being harsh or



When World War II broke out, Jack enlisted in the Army. After completing OCS training, he went to Europe as a Second Lieutenant in Army Intelligence, finishing up in Austria at the end of the war.

critical of any of his associates. His medicine and surgery is excellent and his first concern is, and has always been, the patient. If a patient ever had an advocate in the medical profession, Jack has always been at the forefront.

During his medical school years, Jack was fortunate enough to discover a cute little redhead named Jean Clarkson from Ansley Park (a subdivision next to Morningside) who worked in the Physiology Department at the Medical School. He convinced her to marry him. Their union has lasted for almost 36 years and produced four fine progeny (two daughters and two sons).

[Jack] can always be counted on to keep a cool head, [and] look at all situations objectively. . . .



Married to the former Jean Clarkson of Atlanta, Harrison "Jack" Rogers has had a long and illustrious career as a medical politician and spokesman for cost containment and quality patient care.

Following graduation from Emory in 1952, it was off to Yale for a surgical internship and then Boston VA for his residency. Since completing the latter in 1957, he has been in private practice in Atlanta.

Early in practice, two of Jack's good friends, Frank Walker and Bill Dowda got him interested in the original Fulton County Medical Society (now called the Medical Association of Atlanta). He later became its president. He moved on to the Medical Association of Georgia where he was Speaker of the House, and finally to the AMA, where he will assume its presidency this month. Only two other Georgians have had this honor: Dr. James Paullin, of Atlanta, in 1943, and Dr. Henry F. Campbell, of Augusta, in 1885.

Incidentally, in writing about Jack, I forgot to tell you that in 1952, while at Yale, he decided to use his real name, "Harrison," and to those who have known him since, that is his name. He is still Jack to his old friends, though. We never did find out where the name Jack came from, unless it was from Jack Armstrong — All American Boy.

Now a few words about "a man named Jack" who is about to lead America's largest organized medical association. First, he is an excellent physician who genuinely cares for his patients, including their physical, emotional, and financial well being. Long before it was popular to talk about cost containment, Jack was preaching to his colleagues and residents about not being wasteful. He believes in first class but not wasteful medicine. He can always be counted on to keep a cool head, look at all situations objectively, and make a decision which he thinks will be best for all involved, even if it is not the most popular.

Why is the writer of this article so sure about this man named Jack? Well, I was the younger boy in the neighborhood, a classmate in medical school, and for a number of years have been associated in the practice of surgery. I have had the opportunity to observe and know this man for almost 50 years. The AMA is fortunate to have a man of his caliber to lead it during the turbulent times that medicine is going through in the mid-1980s. ■

The Speaker's Eye View of the 1985 Annual Session

Jack F. Menendez, M.D.

The recent Annual Session of the House of Delegates of the Medical Association of Georgia, held during the last weekend of April in Savannah, provided the delegates with an "opportunity" to deal with some very difficult matters. One of the main topics of discussion — whether or not MAG should sponsor an Alternative Health Care Delivery System — was first discussed on the floor of the House by a called meeting in October, 1984. At that time, the House mandated that such a system be studied and prepared for implementation if the 1985 House so decided. In the interim, the concept was taken to all the county medical societies at their meetings, and the facts concerning Alternative Health Care Delivery Systems and the effects on the physician's practice were presented.



Jack F. Menendez, M.D., Macon, Speaker of the House.

Building the Foundation

Preparation for the 1985 Annual Session started in May, 1984, with a meeting of the Speaker, Vice Speaker, Executive Director (Mike Fowler was newly on the job at this time), and the Staff who had chaired the reference committees in the 1984 session. The site of the meeting was a restaurant in Atlanta, 103 West, selected by Dr. Kaufmann who is very knowledgeable about the hotel and restaurant industry, and has received the affectionate title of "Vice Speaker in Charge of Fine Dining." At this critique session every year, we go over all aspects of the past Annual Session. We evaluate the facility, was the service in the meeting room adequate and did the delegates seem to be pleased with it? The Staff gives their opinions concerning the various reference committee reports, how they are written, what we can do to improve them. We also assess the interest of the various participating physicians on the reference committees. What we try to end up with at the end of the critique is an assessment of the hotel and meeting rooms where the Annual Session was held, and an on-going assessment of the reference committee members. After the critique session, I receive written reports from the various staff members who staffed the reference committees, concerning improvements they believe should be made. I incorporate these to the degree possible, bringing them before the Annual Session Committee.

In January, 1985, the preparation for the Annual Session began in earnest. I met with Mike Fowler and the hotel personnel at the Regency Hyatt in January, and re-evaluated the facility from beginning to end (since we have had an Annual Session there during my time as Speaker, I was reasonably familiar with the facility). We toured the meeting rooms and showed the hotel manager how we wanted the various rooms, the Ballroom and the Reference Committee rooms set up. We also met with the auxiliary president for the same purposes.

At this time, letters were also sent to the various medical societies, asking them to submit names of society members who were interested in serving on reference committees, and to give a preference if they had one. From these lists, the reference committees are selected, balancing inexperienced with experienced people, always trying to have either the chairman or the vice chairman of a reference committee with previous experience in chairing one. This year, the list received from the county medical societies contained so many names with people interested in serving, that I felt it wise to put 10 people on each reference committee, with the exception of Reference Committee F, where there were only 8 people who expressed an interest. (I don't think anyone without an interest in financial matters should be put on Reference Committee F.) During this time, there were phone calls between myself, Dr. Kaufmann, Lynn Pearson, Mike Fowler, and others, as we receive the committee reports and resolutions, try

Dr. Menendez served as Speaker of the 1985 House of Delegates. He practices surgery at 700 Spring St., Macon, GA 31201.

to understand them and refer them to the proper reference committee. The Delegates Handbook is also in preparation at this time. As we receive reports and resolutions, these are put into the handbook which is printed and mailed to the delegates as soon as possible.

This year, with the concept of the MAG sponsorship of an Alternative Health Care Delivery System being possible, the Annual Session Committee felt that special attention should be given to this in a reference committee. Therefore, we decided to hold that reference committee hearing in the afternoon on Friday, thus allowing more members to attend.

Implementation of the House Plans

With this background information in hand, I would now like to give you the Speaker's Eye View of the 1985 Annual Session. As I left Macon Wednesday morning for Savannah, I felt reasonably certain that our planning was complete, but there was still a nagging fear that some area of preparation had not been completed. I especially wanted things to run smoothly because Mike Fowler was so concerned about the Annual Session from the standpoint of preparation, this being his first Annual Session as Executive Director. The Executive Committee met Wednesday evening and went very smoothly. We were pleasantly informed by Mr. Thomas Gose, the new Chief Executive Officer of MAG Mutual, that he would be able to restore some monies cut from the MAG budget. This would improve our financial status significantly. I was gratified to know that our budget would likely be able to reflect a surplus, as mandated by the House last year. The Board of Directors Meeting was held all day Thursday, and though the meeting was somewhat longer than last year's (this Board discussed all the committee reports in the Delegates Handbook), there seemed to be no new areas of concern. I got the feeling from comments by Board members that they were reluctantly in favor of the HMO concept being proposed by MAG.

The first General Session began at 8:00 on Thursday evening and was presided over by Dr. Bill Clark, our President. At this session, AMA-ERF checks and various awards are given out. For me, the highlight of the evening was the remarks by Dr. A. A. McNeill of Camilla who received the Family Physician of the Year Award for 1985. Following the General Session, the First Session of the House of Delegates started about 20 minutes late. Based on prior experience, we have streamlined the election process so that unopposed candidates are elected at that Session after all nominating speeches are given, and only the contested races, which this year were President-Elect and Secretary, are voted on at the Saturday session. By judicious short cuts and rapidly moving through the business at hand, we were able to finish in one hour. I feel this keeps me in good standing with the delegates, since many of them are still trying to keep a dinner reservation. They want to avoid upsetting their wives this early in the Session.

This Annual Session provided the delegates with an "opportunity" to deal with some very difficult matters, including formation of an IPA HMO.

The next morning at 7:15, I, along with the Vice Speaker and Staff, meet with the Reference Chairmen and Vice Chairmen and our attorney, Dick Vincent, and go over the various reference committee functions. The Reference Committee Chairmen are briefed on how to hold a hearing, how to write reports and are given the packet of materials needed for them to do so. All the reference committee hearings are to start promptly at 9:00 AM, with the exception of Reference Committee G which is to start at 2:00 PM in the main Ballroom. As I stated earlier, this was intentional, so as to give full attention to the new IPA/HMO concept.

We then adjourned to the delicious GaMPAC breakfast, where we heard a talk by our fellow physician and United States Representative from the Eighth District, J. Roy Rowland. J. Roy's talk was very much to the point. As a physician, he knows all too well the problems we face in our dealings with the government. Following the GaMPAC breakfast, the reference committees got down to work and started their hearings. Things ran very smoothly in the hearings, and most of them were through taking testimony by lunch time.

From the lists sent by the various county medical societies, members are selected to serve on the reference committees, balancing inexperienced with experienced people.

At the MAG Mutual Founders Club Luncheon, we again heard an excellent address by a gentleman from Lloyd's of London, the company that is MAG Mutual's reinsurer. I was surprised to learn that Lloyd's of London is not an insurance company, but actually a meeting place for brokers and underwriters to write insurance policies from all over the world.

Following the luncheon, the Ballroom was cleared, but there was not enough time to remove the tables, so that when the Reference Committee G hearings start at 2:00, the delegates sat around the tables instead of the usual classroom style. There are several excellent presentations of MAG's IPA/HMO proposal. As they are starting to give these presentations, I realize to my horror that the PA system has not been put into the room. I bring this to the attention of the Chairman, Richard Cohen, and we decide to go ahead and install the PA system while the hearings are going on. Fortunately, Richard has a strong voice and was able to be heard without a microphone until it was in place. Reference Committee G's testimony lasted 5 full hours, concerning the single topic of MAG IPA/HMO proposal. I believe this was

time well spent to bring our delegates to a point of fully understanding the structure and the implications of founding such an Alternative Health Care Delivery System. After the end of Reference Committee G's testimony, the Chairmen of all the reference committees, typing pool staff, Dr. Kaufmann, myself, Mr. Vincent, and Mr. Byrd retired to the MAG Workroom to work on the reference committee reports. These were completed about 1:30 AM and sent to the printers, so they would be available for distribution early Saturday morning.

Based on prior experience, we have streamlined the election process so that unopposed candidates are elected at the first General Session.

Mike Fowler joined us after the Past President's dinner was over. He told us that the Past Presidents felt there would be no way we could finish the hearings on Saturday, what with the large amount of regular business we had on hand, in addition to the IPA/HMO concept. I felt, based on my assessment of the information, that we would be through by about 4:30 PM. As it turned out, we were through at 4:10 PM . . . !

Bibb County Medical Society Caucus met at 7:00 AM. We discussed in our delegation various reference committee reports and also listened to the candidates for the contested offices speak to us concerning their platforms. I left the Caucus slightly before it was finished so that I could go to the Ballroom and be sure that everything was in order. With a few minor changes, everything was ready for the House of Delegates meeting at 9:00 AM. We started promptly and proceeded smoothly. In the 9 times that I have been involved in presiding over the House of Delegates, I felt that this was the smoothest House we have ever had. We finished all of the reference committee reports except Reference Committee G by lunch time. Following lunch, we spent approximately 2 hours working on Reference Committee G's report and finally adopted the plan proposed by the Executive Committee through the Reference Committee, namely, that MAG should sponsor an IPA/HMO.

Prior to the beginning of the House of Delegates Session, Jack Raines, our Parliamentarian, said that he felt that a "Co-Parliamentarian" would be a good idea, and would help him to handle his chores more expeditiously. I appointed Dr. Charles Lanford as Co-Parliamentarian for this Session, and this worked very well. I feel that the teams of Drs. Raines and Lanford, and Dr. Kaufmann and myself handled the debate on the floor of the House very smoothly this year.

Immediately following the adjournment of the House of Delegates, the final General Session of the House was held and the Board of Directors was reformed, re-electing Dr. Joe Nettles of Savannah as Chairman and Dr. Bill Collins of Atlanta as Vice Chairman. We also swore in all the newly elected officers of MAG as well as our AMA Delegates and Alternate Delegates.

By this time, I was thoroughly exhausted, I went back to my room, and while it was still fresh in my mind, wrote down all of the weak points in the reference committee reports from the standpoint of clarity and format, and all the stumbling blocks to smooth handling of debate on the floor of the House. One area that is difficult to handle is when a reference committee refers resolutions or committee reports to another committee. This is perfectly proper for the reference committee to do so, but since a motion to refer to a committee is not debatable or amendable in the general sense, it seems to frustrate the will of the House to debate the topics referred to the committee. This has usually resulted in a motion to reconsider, at which time the material is debated and then referred to committee. Dr. Jack Raines, our Parliamentarian has addressed this topic specifically in an article which will appear in a future issue of the *Journal*.

Reference Committee G was formed to deal exclusively with the new IPA HMO concept and met at a different time from the other reference committees to allow for maximum participation by the delegates.

In closing, let me take this opportunity to thank everyone who was so helpful this year. I feel we have an excellent, professional House of Delegates, which is always ready to help me and the Vice Speaker through any gaffe that we may pull at the podium. I thank them for this. I also want to thank MAG Staff, including those who helped with writing the reference committee reports and our super typing pool, who reproduced the reports expeditiously, even though there was only one word processor functioning at the time. I also want to thank my Co-Parliamentarians, Drs. Raines and Lanford, and also acknowledge the invaluable help given me by Dr. Kaufmann, who was always whispering to me at the podium, trying to keep me straight. The road to a smooth House of Delegates Meeting is not an easy one, but I believe with good will, persistence, and hard work, it can be successfully navigated. ■

Summary of the Proceedings of the Medical Association of Georgia's 131st Annual Session

April 24-28, 1985, Savannah, Georgia

First General Session

Call to Order

The First General Session of the 131st Annual Session of the Medical Association of Georgia was called to order by the President, S. William Clark, Jr., M.D., of Waycross, at 7:00 PM in Regency Ballrooms A & B, Hyatt Regency, Savannah. Dr. Clark introduced The Reverend Doctor Bruce Wilson, Pastor of the Grace United Methodist Church, Savannah, who delivered the following invocation:

"Healer of Nations, Divine Physician and Lord whom to know is love and whom to love is to serve, receive our thanks that Thou hast led us to a work of relieving distress and building hope by faithful service and special attention. Bestow upon us skills to enable us, faith to sustain us, and



The Hyatt Regency in Savannah hosted the 131st Annual Session of the MAG.

joy to fulfill us. Keep us sensitive to suffering, responsive to need, and attentive to loneliness. Supply us with stamina and energy, concern and love, so that we may be strong vessels of mercy to those brought to us for care. Use our words and works as expressions of Your love embracing all people. May this be so certainly the tenor and tone of this meeting that our coming together may write these ideals, hopes, and dreams indelibly in our hearts. Amen."

Dr. Clark introduced Mrs. Sammie Dixon, who sang the National Anthem (accompanied by John D. Watson, Jr., M.D.) and led the audience in the Pledge of Allegiance. Dr. Clark introduced James P. Evans, M.D., President of the Georgia Medical Society, and Savannah Alderman Walter C. Corrish, Jr., to extend a warm welcome to all attending the meeting.

Memorial Service

The audience stood in respect as Dr. Clark read the names of those members who had died since the 1984 Annual Session. Included were: J. Malcolm Bazemore, Augusta; Dave Berman, Columbus; Robert T. Connor, Rome; Michaela Dynin, Savannah; Walter C. Earle, Atlanta; David Ebersbach, Atlanta; George B. Fisher, Franklin; Brent Fox, Columbus; Robert C. Garrett, Vienna; José M. Gonzalez, Milledgeville; James P. Hanner, Cumming; W. D. Hall, Calhoun; E. Garland Herndon, Jr., Atlanta; William H. Holden, Nova Scotia; M. A. Hubert, Athens; John R. Hudson, Milledgeville; Zach W. Jackson, Atlanta; William C. T. Jernigan, Columbus; Zachary M. Kilpatrick, Augusta; Charles L. Langsam, Atlanta; Steve Lintymer, Columbus; Mason I. Lowance, Atlanta; George A. McCrary, LaGrange; George E. Mixon, Augusta; Sam W. Perry, Florida; Carl Pittman, Sr., Tifton; Phil E. Roberson, Albany; C. J. Roper, Jasper; Ruth T. Sanders, Augusta; T. A. Sappington, Thomaston; L. M. Shealy, Quitman; W. Pat Smith, Stone Mountain; Robert J. Starling, Donalsonville; Elpidio F. Stincer, Milledgeville; Albert L. Stone, Forest Park; Robert M. Tankesley, Montreat, NC; J. W. Thurmond, North Augusta, SC: Hoke Wammock, LaGrange; Ralph C. Williams, New Mexico; R. Hugh Wood, Atlanta; M. H. Wylie, Augusta; and James Yarbrough, Columbus.

Certificates of Appreciation

Certificates of Appreciation were presented to those members who have been active in Association affairs and through their talents and hard work have made special contributions to medicine and the Medical Association of Georgia.

Certificates were awarded to the following people:

S. William Clark, Jr., M.D. — MAG President, 1984-85

John D. Watson, Jr., M.D. — MAG First Vice President, 1984-85

Ellis B. Keener, M.D., — Chairman, Committee on Scientific Assembly, 1972-1985

Albert M. Deal, M.D. — Composite State Board of Medical Examiners, 1951-1984

Mrs. Robley D. (Ann) Smith — MAG Auxiliary President, 1984-1985

Mr. L. B. Storey, Jr. — MAG Director of Finance, 1972-1984

Mr. Howard Lamb — MAG Mutual Executive Vice President, 1982-1984

Joseph P. Bailey, M.D. — MAG Second Vice President, 1984-1985

John T. Yauger, M.D. — MAG Secretary, 1984-1985

Charles C. Stamey, M.D. — Chairman of MAG Hospital Medical Staff Section, 1982-1985

Judson G. Black, M.D. — Chairman MAG Nutrition Committee, 1980-1985

Fifty-Year Members

The following physicians were honored for having practiced medicine for 50 years or more: William L. Barton, Macon; A. S. Batts, Hawkinsville; James M. Bazemore, Augusta; H. Bagley Benson, Atlanta; Howard C. Glover, Jr., Newnan; Irvin L. Greenberg, Atlanta; Robert B. Greenblatt, Augusta; Milford B. Hatcher, Macon; Allen E. Hauck, Atlanta; John T. Leslie, Avondale Estates; Jack M. Levin, Atlanta; Lawrence P. Matthews, Atlanta; Robert W. McAllister, Macon; E. K. Munn, Columbus; C. Purcell Roberts, Atlanta; W. Patrick Smith, Jr., Stone Mountain; Cyrus W. Strickler, Jr., Atlanta; T. O. Vinson, Atlanta; C. W. Whitworth, Gainesville; and Luther H. Wolff, Columbus.



S. William Clark, Jr., M.D., of Waycross, 1984-85 President of the Medical Association of Georgia.

Life Members

Dr. Clark announced that the following members had been awarded Life Membership in the Medical Association of Georgia: Tully L. Blalock, Atlanta; William S. Boyd, Augusta; Stephen W. Brown, Augusta; Bruce D. Burleigh, Marietta; Maurice Dunn, Augusta; Albert L. Evans, Atlanta; Joseph Eversole, Macon; W. Stewart Flanagin, Augusta; Anthony H. Gallis, Athens; Howard C. Glover, Jr., Newnan; Robert B. Greenblatt, Augusta; Harry T. Harper, Jr., Augusta; Joseph C. Hatch, Seminole, Florida; O. Eugene Hanes, Atlanta; Joseph H. Hilsman, Atlanta; Lynn M. Huie, Monroe; Robert Leonard, Augusta; Harold B. Levin, Atlanta; Robert C. McGahee, Augusta; Henry D. Headers, Marietta; William H. Moretz, Augusta; George A. Niles, Jr., Atlanta; Sidney Olan-



Mrs. Robley Smith (Ann), President of the Auxiliary to the MAG, reports on Auxiliary activities during the past year.

sky, Atlanta; Elton S. Osborne, Jr., Marietta; Joseph H. Patterson, Atlanta; McLeod Patterson, Columbus; John T. Persall, Huntsville, Alabama; John H. Ridley, Atlanta; J. Robert Rinker, Augusta; Arthur G. Singer, Toccoa; Harry E. Talmadge, Athens; J. W. Veatch, Jr., Atlanta; A. J. Waters, Augusta; W. G. Watson, Augusta; and Robert M. West, Forest Park.

AMA-ERF Checks

Each year, the American Medical Association-Education Research Foundation distributes funds collected in large part by the Auxiliary of the AMA and its various organizations. Mrs. J. Thomas Sosby, Chairman of the A-MAG AMA-ERF, assisted Dr. Clark in the presentation of money raised in Georgia to our four medical schools, as follows:

Medical College of Georgia — $14,626.94
Emory University School of Medicine — $16,059.82
School of Medicine of Morehouse College — $4,025.12
Mercer University School of Medicine — $1,260.00

Report of the Auxiliary

Mrs. Robley D. (Ann) Smith, President of the MAG Auxiliary, introduced Mrs. Dent W. (Ann) Purcell, current President-Elect of the MAG Auxiliary. In addition to the filed written report, Mrs. Smith gave a slide presentation of activities and services provided by the Auxiliary this past year. She expressed the desire of the Auxiliary of the MAG to continue in a strong public relations role for the association.



Dr. and Mrs. Carl R. Hartrampf, Jr., of Atlanta. Dr. Hartrampf was the honored recipient of MAG's prestigious award, the Hardman Cup. This award is presented for the "achievement of anyone who, in the judgment of the Association, has solved an outstanding problem in public health or made a discovery in medicine or surgery or such contribution to the science of medicine." Dr. Hartrampf, a plastic surgeon, was honored for this innovative work in breast reconstruction.

Presentation of Awards

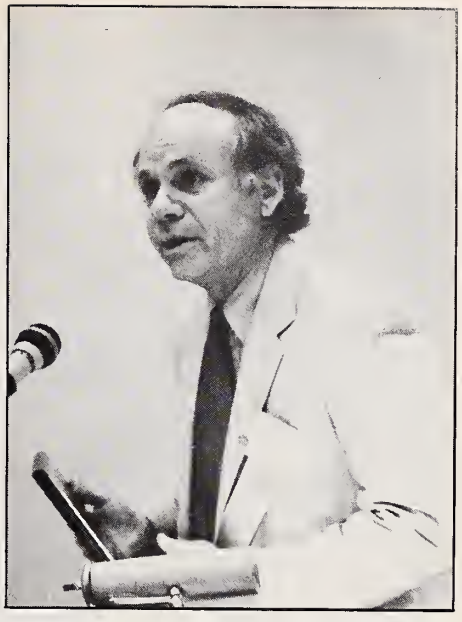
Hardman Cup

The Hardman Cup, the Medical Association of Georgia's most prestigious award, is presented for "the achievement of anyone who, in the judgement of the Association, has solved any outstanding problem in public health or made any discovery in medicine or surgery or such contribution to the science of medicine." This award is *not* given annually but only on such occasions when a candidate merits this special honor. In the 36 years since it was first presented, it has been given only 18 times.

This year's recipient of the Hardman Cup was Dr. Carl R. Hartrampf, Jr., a plastic surgeon practicing in Atlanta. Dr. Hartrampf developed a technique of breast reconstruction in which an island of abdominal tissue consisting of fat, skin, and a segment of the rectus abdominus muscle is transposed from the abdomen to the breast creating a breast of all natural tissue. He has currently performed 214 such operations. In 1983, he was the recipient of the prestigious James Barrett Brown Award for advancement of knowledge in the field of plastic and reconstructive surgery by the American Association of Plastic Surgeons. In 1984, he was the recipient of the Simon Fredericks' Award from the American Society for Aesthetic Plastic Surgeons. A certificate was also presented recognizing Dr. Hartrampf's achievement.



(Right): C. Emory Bohler, a family practitioner from Brooklet, receives the Distinguished Service Award from MAG President Bill Clark. The award is given for distinguished and meritorious service reflecting credit and honor on the Association. He has actively served in the MAG, the AMA, and on the Board of Human Resources for the State of Georgia.



Albert A. Carr, an internist from Augusta, was honored with MAG's Civic Endeavor Award for his outstanding service and participation in civic activities. Dr. Carr is Director of the Endocrine Diagnostic Lab at MCG. The Georgia High Blood Pressure Advisory Council, the American Heart Association, the Council of High Blood Pressure Research, and the Rotary Club of Augusta are but a few of the civic organizations to which Dr. Carr belongs.

Distinguished Service Award

The Distinguished Service Award is very special and presented for distinguished meritorious service which reflects credit and honor on the Association. Over the past 27 years, this award has been presented only 20 times.

This year's recipient of the Distinguished Service Award was Dr. C. Emory Bohler of Brooklet. Dr. Bohler has served medicine in numerous capacities and his vital interest and involvement in all the affairs within the House of Medicine is demonstrated by his active participation in the MAG.

In addition to practicing general medicine in Brooklet, Dr. Bohler has generously found time to serve his county medical society as a thoughtful counsel. He has also found ample time to actively serve in the Medical Association of Georgia, the American Medical Association, and most recently, 5 years as a member of the Board of Human Resources for the State of Georgia. His energy and dedication to the practice of medicine and the welfare of his patients is beyond measure. He has been honored professionally over the years as President of the Ogeechee River Medical Society, Delegate to the American Medical Association, Chairman of the Georgia Delegation of the AMA, and received the MAG's Family Physician of the Year Award in 1979.

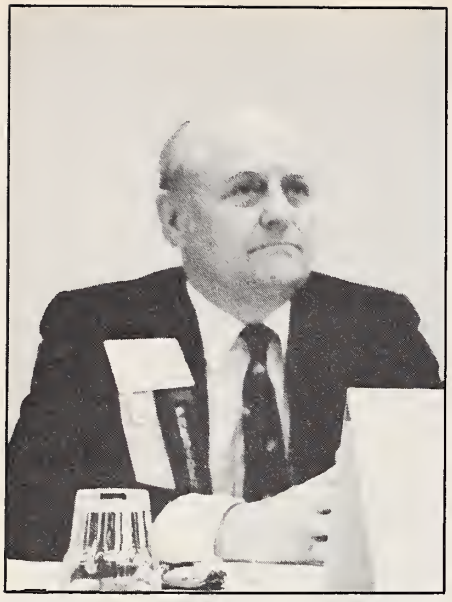
Civic Endeavor Award

The Civic Endeavor Award is unique among the awards given by the MAG. Its purpose is to honor those physicians whose motivations find their essential expression in doing good deeds for the general public through participation in civic affairs.

The recipient of this year's Civic Endeavor Award was Dr. Albert Ayerst Carr, of Augusta. Dr. Carr exemplifies the best traditions of the medical profession in his own practice and at the same time has made significant contributions to the civic life in his community and the state.

Dr. Carr has been extremely active in some very significant community activities as well as many professional activities which are not directly related to his work as an internist. Dr. Carr has been with the Department of Medicine at the Medical College of Georgia since 1967. He has been Director of the Endocrine Diagnostic Lab since 1969; Chief, Section of Hypertension and Professor of Medicine and Pharmacology and Graduate Studies since 1972. He has been an active and most valuable member of the Richmond County Medical Society, currently serving as its President-Elect. Dr. Carr is a member of the International Society of Hypertension and has served on the Richmond County Board of Health and is presently serving as its Chairman. Among his many other endeavors, Dr. Carr has served on the Georgia High Blood Pressure Advisory Council and specifically supported the development of a program to decrease the cost of treatment for hypertension, serves as a member of the American Heart Association, a member of the Council of High Blood Pressure Research of the American Heart Association, and is a member of the Rotary Club of Augusta.

Albert's civic activities represent physicians at their finest, serving humanity not only through medicine but in their community activities.



William D. Logan, Jr., M.D., 1984-85 President-Elect of the MAG.



A. A. McNeill, Jr., of Camilla, was this year's recipient of MAG's Family Physician of the Year Award. Presenting him with the award is Chappell A. Collins, Jr., of Albany.



Cyler Garner, Treasurer; Joe Nettles, Chairman of the Board of Directors; and Jack Menendez, Speaker of the House, are seated at the head table of the House of Delegates.



Seated at the head table of the House are Cyler Garner, Treasurer; Bill Clark, President; Bill Moore, Immediate Past President; and William "Dub" Logan, President-Elect.

Family Physician of the Year Award

The recognition of the Outstanding Georgia Family Physician is made by the Board of Directors of the Georgia Academy of Family Physicians. Dr. Chappell Collins, Albany, presented the Family Physician of the Year Award for 1985 to A. A. McNeill, Jr., M.D., of Camilla.

Dr. McNeill is a man who exemplifies the ideal family physician for his involvement in professional, governmental, civic, and family activities. He believes in a strong family unit.

Since 1950, Dr. McNeill has practiced family medicine in Camilla. He was certified as a Diplomate in the AAFP in 1978 and re-certified in 1984. He is Chief of Staff at the Newton County Hospital and he has been Mayor of the City of Camilla for the last 6 years. Additionally, he has served as the Chairman of the MAG Committee on Third Party Relations, Vice Chairman of the Medical Advisory Committee on Medicaid, President of the GAFP, President of the Newton County Medical Society, Secretary of the Newton County Medical Society for 30 years, Director and Delegate for the Second District of the GAFP, Director of the Downtown Development Authority, President, of the Board of Directors of the PTA, and member of the Rotary Club.

Adjournment

Following several brief announcements, Dr. Clark adjourned the First General Session at 8:30 PM.



The First Session of the House of Delegates opened Thursday evening, April 25. Among those delegates present who appear in this photo are Virgle McEver, Luther Thomas, Bill Dowda, John Heard, Arthur Merrill, Jr., Charles Underwood, Doug Whitney, Charles Todd, James Skinner, and L. C. Buchanan.

First Session — House of Delegates

Thursday, April 25, 1985

The First Session of the MAG House of Delegates was called to order by the Speaker of the House, Jack F. Menendez, M.D., of Macon, at 8:35 PM, Thursday, April 25, 1985, in Regency Ballrooms A & B, Hyatt Regency Hotel, Savannah, Georgia. James A. Kaufmann, M.D., Atlanta, served as Vice-Speaker of the House.

The Speaker called for a report from the Credentials Committee which was given by Milton I. Johnson, Jr., M.D. He reported that 139 delegates representing 34 component county medical societies in attendance and accordingly announced a quorum of the House was present.

Attendance

Delegates Edwin J. Galler, M.D., Paul Dickson, M.D., William M. Headley, M.D., Luther E. Brown, M.D., Rodney M. Browne, M.D., Ronald A. Freeman, M.D., David J. Frolich, M.D., Kenneth C. Henderson, M.D., Emory W. Holloway, Jr., M.D., C. E. Johnson, Jr., M.D., Milton I. Johnson, Jr., M.D., Charles A. Lanford, M.D., Alva Louie Mayes, Jr., M.D., Jack F. Menendez, M.D., Minor C. Vernon, M.D., Alexander H. S. Weaver, M.D., Don R. Connell, M.D., Gary R. Loveless, M.D., John R. Ware, M.D., Robert G. Bradbury, M.D., Carson B. Burgstiner, M.D., Anthony M. Costrini, M.D., James P. Evans, M.D., J. Moultrie Lee, M.D., Joe L. Nettles, M.D., Dent W. Purcell, M.D., Robert B. Quattlebaum, Jr., M.D., Eloise B. Sherman, M.D., Roland S. Summers, M.D., Dan H. Willoughby, M.D., Rupert H. Bramblett, M.D., Cecil L. Miller, M.D., William G. Cutts, Jr., M.D., John G. Morrow, III, M.D., A. D. Muse, Jr., M.D., Manolo B. Apanay, M.D., James L. Askew, M.D., Wells Riley, M.D., Richard A. Stappenbeck, M.D., Donald H. Campbell, M.D., Richard W. Cohen, M.D., James S. Goodlet, M.D., William E. Holladay, Jr., M.D., Philip Z. Israel, M.D., Rene A. Morell, M.D., Harry Porter, Jr., M.D., John E. Roberts, M.D., Gerald E. Sanders, M.D., Dan B. Stephens, M.D., John D. Tucker, M.D., Charles R. Underwood, M.D.,

David W. Adcock, M.D., John S. Newton, M.D., H. Duane Blair, M.D., L. C. Buchanan, M.D., Harry Foster, M.D., John P. Syribeys, M.D., William J. Rawls, M.D., William G. Whitaker, M.D., William Tippns, M.D., John P. Heard, M.D., Richard C. Mattison, M.D., Walker L. Ray, M.D., Clyde B. Rountree, M.D., O. Wytch Stubbs, Jr., M.D., Ralph A. Tillman, M.D., Roy W. Vandiver, M.D., Michael Roberts, M.D., George M. Chastain, M.D., Chappell A. Collins, Jr., M.D., Carl V. Hancock, Jr., M.D., Ray L. McKinney, M.D., Frank F. Middleton, M.D., Joseph M. Jackson, M.D., Sidney A. Bell, M.D., John I.

Dickinson, M.D., Jim Lee Rogers, M.D., Emmerich Von Haam, M.D., Sam O. Atkins, M.D., David Sowell, M.D., Teresa E. Clark, M.D., Harold Asher, M.D., Peter Meehan, M.D., William H. Biggers, M.D., Patrick Anders, M.D., Zach Newton, M.D., Frank Houser, M.D., Hugo S. Moreno, M.D., Thomas J. Anderson, Jr., M.D., James E. Averett, Jr., M.D., Allan C. Bleich, M.D., Spencer S. Brewer, Jr., M.D., Gwynne T. Brunt, Jr., M.D., William B. Burns, M.D., Alvin H. Clair, M.D., Grady S. Clinkscales, Jr., M.D., Thomas A. Collentine, M.D., William C. Collins, M.D., R. Carter Davis, M.D., F. William Dowda, M.D., Richard E. DuBois, M.D., J. W. Estes, M.D.,

E. C. Evans, M.D., Louis H. Felder, M.D., Milton Frank, III, M.D., Charles E. Harrison, Jr., M.D., J. Harold Harrison, M.D., J. Rhodes Haverty, M.D., W. Dan Jordan, M.D., James A. Kaufmann, M.D., Bob G. Lanier, M.D., William D. Logan, Jr., M.D., Joe B. Massey, M.D., Clinton D. McCord, Jr., M.D., Arthur J. Merrill, Jr., M.D., W. W. Moore, Jr., M.D., Jeffrey T. Nugent, M.D., Harrison L. Rogers, Jr., M.D., J. K. Schellack, M.D., Charles E. Todd, Jr., M.D., Robert Finegan, M.D., L. Newton Turk, III, M.D., Edward J. Waits, M.D., Robert E. Wells, M.D., William H. Whaley, M.D., Douglass G. Whitney, M.D., Frank L. Wilson, Jr., M.D., J. S. Wilson, M.D., John T. Yauger, M.D., Fleming L. Jolley, M.D., Donald H. Manning, M.D., J. L. Rabb, M.D., Joseph G. Bussey, Jr., M.D., Lamar H. Waters, M.D., Robert H. Anderson, Jr., M.D., John W. Darden, Jr., M.D., William B. Jones, M.D., Ellis B. Keener, M.D., Rodney L. Smith, M.D., Johann R. Manning, M.D., Virgle W. McEver, Jr., M.D., James Q. Whitaker, M.D., Ridley M. Glover, M.D., Quentin Price, M.D., Richard A. Wherry, M.D., Michael F. Powell, M.D., James E. Collins, M.D., Larry Brightwell, M.D., Lavon Thurman, M.D., Kenneth L. Goldman, M.D., E. M. Molnar, M.D., Bruce C. Newsom, M.D., Robert M. Patton, M.D., Jack A. Raines, M.D., James H. Sullivan, M.D., John D. Watson, Jr., M.D.,

William A. Wolff, M.D., Stephen Boyle, M.D., George L. Smith, M.D., James H. Tison, M.D., Thomas M. Allen, M.D., Donald C. Abele, M.D., Joseph P. Bailey, M.D., William E. Barfield, Sr., M.D., Claud A. Boyd, Jr., M.D., Leon H. Bush, M.D., Albert A. Carr, M.D., A. Bleakley Chandler, M.D., Michael J. Cohen, M.D., William Quillian, M.D., William Weston, III, M.D., John Molinaro, M.D., Maurice Patton, M.D., Curtis Carter, M.D., James L. O'Quinn, M.D., Luther M. Thomas, Jr., M.D., Edward H. Smith, Jr., M.D., Betty B. Wray, M.D., Charles H. Wray, M.D., Daniel M. Feldman, M.D., John B. Hunt, M.D., Henry Briggs Smith, M.D., Joe C. Stubbs, M.D., Henry A. Foster, M.D., James M. Skinner, M.D., Irving D. Hellenga, M.D., C. Peter Lampros, M.D., Victor C. Bautista, M.D., William A. Lardin, M.D., Gerald B. Muller, M.D., Sammie Dixon, M.D., Robley D. Smith, M.D., John H. Dorminey, M.D., Joseph M. Almand, Jr., M.D., H. Hilt Hammett, Jr., M.D., J. R. Turner, M.D., James F. Beattie, Jr., M.D., Garland E. Kinard, M.D., S. William Clark, Jr., M.D., Floyd E. Davis, M.D., John D. Richmond, M.D., Rudy M. Shirley, M.D., Luis M. Viamonte, M.D., M. C. Adair, M.D., and H. G. Davis, Jr., M.D.

Alternate Delegates Steve Wilson, M.D., Frank P. Bowyer, M.D., Dempsey S. Brown, M.D., Lawrence J. Freant, M.D., G. A. Johnston, M.D., John A. Souma, M.D., S. T. Hartley, M.D., Walter M. Ligon, M.D., Nicholas M. Bath, M.D., Harry N. Dorsey, M.D., Charlie Humphries, Jr., M.D., Anthony F. Isele, M.D., Thomas L. Keith, M.D., Wentford Spears, M.D., Margarita Guzman, M.D., and Bernard R. Simmons, M.D.

Appointments of Committees

The Speaker announced the appointments of the House of Delegates Reference Committees, Credentials Committee, and Tellers Committee as follows:

Reference Committee A: Alexander H. S. Weaver, Chairman, Macon; Richard E. DuBois, Vice Chairman, Atlanta; Dent W. Purcell, Garden City; Rudy M. Shirley, Dalton; Garland E. Kinard, Rossville; Donald H. Campbell, Marietta; Carl V. Hancock, Jr., Albany; Richard A. Stappenbeck, Riverdale; Paul Dickson, Martinez,

Reference Committee B: J. Moultrie Lee, Chairman, Savannah; J. Q. Whitaker, Vice Chairman, Warner Robins; Robert G. Bradbury, Savannah; Luther E. Brown, Macon; Gerald E. Sanders, Marietta; Joseph M. Almand, Jr., LaGrange; H. W. Smith, Swainsboro; Roy W. Vandiver, Decatur; J. L. Askew, Riverdale

Reference Committee C: William H. Whaley, Chairman, Atlanta; Virendra M. Saxena, Vice Chairman, Fort Gaines; J. P. Evans, Savannah; Minor C. Vernon, Macon; John D. Richmond, Dalton; William R. Hardcastle, Decatur; Dan B. Stephens, Marietta; Willard E. Quillian, III, Augusta; George M. Chastain, Albany; William A. Wolff, Columbus,

Reference Committee D: E. M. Molnar, Chairman, Columbus; LaMar S. McGinnis, Jr., Vice Chairman, Decatur; Anthony M. Costrini, Savannah; William E. Barfield, Sr., Augusta; Philip Z. Israel, Marietta; Rodney M. Browne, Macon; John B. Hunt, Valdosta; Clinton D. McCord, Jr., Atlanta; A. Bleakley Chandler, Augusta; Ronald A. Freeman, Macon,

Reference Committee F: H. Duane Blair, Chairman, Decatur; Luther M. Thomas, Jr., Vice Chairman, Augusta; C. E. Johnson, Jr., Macon; Charles R. Underwood, Marietta; Gwynne T. Brunt, Jr., Atlanta; Marvyn D. Cohen, Columbus; Frank F. Middleton, III, Albany; Joe L. Griffeth, Commerce,

Reference Committee G: Richard W. Cohen, Chairman, Austell; Charles A. Lanford, Vice Chairman, Macon; Dan H. Willoughby, Savannah; James W. Estes, Atlanta; James F. Beattie, Jr., Fort Oglethorpe; Ralph A. Tillman, Decatur; Donald C. Abele, Augusta; Lamar H. Waters, Clarkesville; Larry Brightwell, Columbus; Alva Louie Mayes, Jr., Macon,

Committee on Credentials: Milton I. Johnson, Jr., Macon; Harry Porter, Marietta

Tellers Committee: James S. Goodlet, Chairman, Marietta; Kenneth C. Henderson, Macon; John E. Roberts, Austell

Parliamentarian: Jack A. Raines, Columbus; Charles A. Lanford, Macon.



(Right): Jack F. Menendez, a surgeon from Macon, served as Speaker of the House of Delegates; and James A. Kaufmann, an internist from Atlanta, served as Vice Speaker.

Adoption of Minutes

The Proceedings of the 1984 meeting of the MAG House of Delegates as published in the June, 1984, *Journal of the Medical Association of Georgia,* were approved.

The Proceedings of the October, 1984 special called meeting of the House of Delegates as published in the December, 1984, issue of the *Journal of the Medical Association of Georgia,* were approved.

Nominations

Speaker Menendez called on the House to proceed with nominations for the Officers, AMA Delegates, and AMA Alternate Delegates.

Election of Unopposed Candidates

It was agreed at the outset that unopposed candidates would be elected at this Session and the names of the candidates who have opposition would appear on the ballot for election, Saturday, April 28, 1985. Upon nominations duly made and seconded as indicated below, the following slate of officers were presented:

President-Elect: 1) John D. Watson, Jr., M.D., Columbus, was nominated for President-Elect by James H. Sullivan, M.D., Columbus, and seconded by Carson Burgstiner, M.D., Savannah; 2) Virgle W. McEver, Jr., M.D., Warner Robins, was nominated by James Whitaker, M.D., Warner Robins, and seconded by Joe Nettles, M.D., Savannah.

First Vice-President: Joseph P. Bailey, M.D., Augusta, automatically moves to First Vice-President.

Second Vice-President: Charles Underwood, M.D., Marietta, was nominated by James S. Goodlet, M.D., Marietta, and seconded by Joe Stubbs, M.D., Valdosta.

Secretary: 1) Ralph A. Tillman, M.D., Decatur, was nominated by Lamar S. McGinnis, Jr., Decatur, and seconded by Charles A. Lanford, M.D., Macon; 2) Robert A. Farrell, M.D., Rome, was nominated by Jim Rogers, M.D., Rome, and seconded by Sidney Bell, M.D., Rome.

AMA Delegates: 1) C. Emory Bohler, M.D., Brooklet, was nominated to succeed himself for a two-year term by Gary Loveless, M.D., Statesboro; 2) W. W. Moore, Jr., M.D., Atlanta, was nominated to succeed himself for a two-year term by J. Harold Harrison, M.D., Atlanta; 3) Charles D. Hollis, Jr., M.D., Albany, was nominated to succeed himself for a two-year term by Frank Middleton, III, M.D., Albany.

AMA Alternate Delegates: 1) Virgle W. McEver, M.D., Warner Robins, was nominated by T. J. Anderson, M.D., Atlanta, for a two-yera term; 2) C. Peter Lampros, M.D., Toccoa, was nominated by Irving Hellenga, M.D., Toccoa, for a two-year term; 3) L. Newton Turk, III, M.D., Atlanta, was nominated by William Whaley, M.D., Atlanta, for a two-year term.

Judicial Council: 1) John M. "Pepper" Martin, M.D., was nominated to succeed himself by S. William Clark, Jr., M.D., President of the MAG, for a term to expire in

1989; 2) C. Emory Bohler, M.D., was nominated to succeed himself by S. William Clark, Jr., M.D., President of the MAG, for a term to expire in 1990. Dr. Bohler was also nominated to continue as Chairman.

There being no further nominations nor any expressed intention to mount a write-in campaign for any of these officers, the Speaker declared all nominations closed. Unopposed candidates for the officers of Second Vice President, AMA Delegates, AMA Alternate Delegates and Judicial Council were elected by acclamation.

Directors and Alternate Directors

Speaker Menendez announced the results of the elections for Directors and Alternate Directors as conducted by the District Medical Societies and Component County Medical Societies:

First District:
Leon Curry, Metter — Director
Douglas O. Cope, Statesboro — Alternate Director
Second District:
Sammie Dixon, Tifton — Director
Lannie R. Copeland, Moultrie — Alternate Director
Third District:
Virgle W. McEver, Jr., Warner Robins — Director
Wentford A. Spears, Warner Robins — Alternate Director
Tenth District:
William M. Headley, Milledgeville — Director
Charles Wills, Washington — Alternate Director
Cobb County Medical Society:
Dan B. Stephens, Marietta — Director
Richard W. Cohen, Austell — Alternate Director
Crawford W. Long Medical Society
Philip A. Sheffield, Athens — Director
William C. Holmes, Athens — Alternate Director
Medical Association of Atlanta:
J. Harold Harrison, Atlanta — Director
William C. Waters, III, Atlanta — Alternate Director
Georgia Medical Society:
Joe L. Nettles, Savannah — Director
Clyde L. Olson, Savannah — Alternate Director

Annual Reports

Speaker Menendez called for the Annual Reports of the MAG Officers, Directors, Committees, Departments, and other reports to be introduced at this Session. These are listed below with the Reference Committee (Ref. Com.) to which these reports were referred:

Officers' Reports

President — Not Referred
First Vice President — Not Referred
Chairman of the Board — Not Referred
Treasurer — Ref. Com. F

Reports of Directors

All of the following Director's Reports were not referred to a Reference Committee:

First District Society
Second District Society
Third District Society
DeKalb Medical Society
Medical Association of Atlanta
Sixth District Society
Seventh District Society
Eighth District Society
Ninth District Society
Tenth District Society
Bibb County Medical Society
Clayton-Fayette County Medical Society
Cobb County Medical Society
Crawford W. Long Medical Society
Dougherty County Medical Society
Floyd-Polk-Chattooga County Medical Society
Georgia Medical Society
Hall County Medical Society
Muscogee County Medical Society
Richmond County Medical Society

Committee Reports

Access to Health Care — Not Referred
Auxiliary — Not Referred
Building & Land — Not Referred
Cancer — Ref. Com. D
Fiscal Note — Ref. Com. F
Computer Advisory — Not Referred
Computer Education — Not Referred
Continuing Medical Education — Not Referred
Cost Awareness — Not Referred
Emergency Medical Services — Ref. Com. B
Finance — Not Referred
Health Education — Not Referred
Impaired Physicians — Not Referred
Legislation — Not Referred
Composite State Board of Medical Examiners — Not Referred
Maternal & Infant Health — Not Referred
Medical Aspects of Sports — Not Referred
Medical Practice — Ref. Com. B
Medical Schools — Not Referred
Medicine & Human Values — Not Referred
Membership — Not Referred
Membership Insurance — Not Referred
Non-Physician Health Care Providers — Ref. Com. A
Nutrition — Not Referred
Occupational Health — Not Referred
Physician-Lawyer Liaison — Not Referred
Prison Health — Not Referred
Public Health — Ref. Com. D
Public Relations — Ref. Com. B
Fiscal Note — Ref. Com. F
Scientific Assembly — Not Referred
Specialty Society Relations — Not Referred
Third Party Payors — Not Referred
Trustees Advisory — Not Referred
Ad Hoc Committee on Osteopathic Membership — Ref. Com. A
Ad Hoc Committee Regarding Physicians Office Based Surgical Units — Ref. Com. C
Preliminary Report of the Ad Hoc Committee on Georgia Physicians Organization — Ref. Com. G
Constitution & Bylaws (reports A-E) — Ref. Com. A
Impaired Physicians Consultant — Ref. Com. A
Supplemental Report of Medicine & Human Values — Ref. Com. B

Departments

Journal of the Medical Association of Georgia — Not Referred

Special Reports

GaMPAC — Not Referred
Auxiliary — Not Referred
MAG Student Section — Not Referred
MAG House Officers Section — Not Referred
AMA Delegation — Not Referred
Judicial Council — Not Referred
MAG Mutual Insurance Company — Not Referred

New Business — Resolutions

The Speaker proceeded to new business by calling for the introduction of Resolutions (Res.) which were assigned to Reference Committees as follows:

Res. 1: Certification for Georgia's Public Schools and State Board of Cosmetology — A
Res. 2: Establishment of Medical Liability Committee — A
Res. 3: Admission of D.O.s to MAG — A
Res. 4: Medical Care of Victims of Rape — D
Res. 5: Diversion of Legitimate Prescription Drugs — A
Res. 6: Osteopathic Physicians — A
Res. 7: Commendation of Rusty Kidd — B
Res. 8: HTLV-III Testing — D
Res. 9: Needle Stick Proposal for HTLV-III — D
Res. 10: Informed Consent — HTLV-III/HBSAG Testing of Patient's Blood Involved with Medical/Laboratory Accident — D
Res. 11: Informed Consent — HTLV-III Testing in Physicians' Offices — D
Res. 12: MAG Public Relations — B
Fiscal Note — F
Res. 13: Georgia Physicians Organization — G
Res. 14: Auxiliary Child Abuse Program — D
Res. 15: Formation of a Physician Organization — G
Res. 16: Unified Membership — County, State, AMA — A
Res. 17: Physician Exemption from Jury Duty — C
Res. 18: Admission of D.O.s to MAG — A
Res. 19: Affiliate Member Administrative Fee — F
Res. 20: Specialty Society Representation/Unified Membership — B
Res. 21: Circulation of *AM News* to National Media — D
Res. 22: Insurance Prior Approval Requirements — B
Res. 23: Clinical Training in STD for Medical Students/Physicians in Training — D
Res. 24: Endorsement of Health IRA — B
Res. 25: Removal of Fee Freeze — B
Res. 26: Economic Credentialing — B
Res. 27: Conflict of Interest — B
Res. 28: Professional Liability Crisis — B
Res. 29: Composite State Board of Medical Examiners — C
Res. 30: Support Funding of Graduate Medical Education — C

At 9:25 PM, following several announcements, the Speaker declared the House in recess until Saturday, April 27, 1985, at 9:00 AM.

Unreferred Reports

The reports which did not have any recommendations were not referred to any Reference Committee. All such unreferred reports were filed for information. They are as follows:

Journal of the Medical Association of Georgia

Edgar Woody, M.D., Editor

In 1984-85, the *Journal* staff continued in its efforts to be responsive to the needs and desires of our readers. In the May issue, home health care for the elderly was featured, with a cover editorial and a special article. The June issue featured proceedings of the House of Delegates in April in Atlanta. In the July issue, the effects of aerobic exercise on a woman's reproductive system was highlighted in a special article supplied to us by the Medical Aspects of Sports Committee. In August, our cover featured AIDS, a modern day tragedy. Three feature articles and an editorial on this timely subject rounded out the issue. In September, the *Journal* featured the MAG Scientific Assembly which met in November in Atlanta. In October, the *Journal* featured a Georgia physician in the United States Congress. A special article by Dr. Roy Rowland and an editorial by Dr. James Kaufmann were featured in this issue. In November, Georgia's Impaired Physicians Program was highlighted. Dr. Douglas Talbott served as guest editor for this superior issue. Many requests for reprints are continuing to be received in the *Journal* office for this issue, confirming the excellence of the material published. In December, the *Journal* featured a striking photographic cover highlighting a maze of medical practice options. The program for the third annual Leadership Conference in February was outlined and discussed by Steve Davis, a member of our executive staff in the headquarters office in Atlanta. Also in the December issue we featured a dedication speech for the Georgia Heart Clinic in La Grange. Speakers included Daniel Federman, Dean of the Harvard Medical School. Of great importance in this December issue were the Proceedings of the Special Session of the MAG House of Delegates on October 13, 1984. An editorial by Dr. Jack Menendez outlined the alternatives considered by the Special House meeting. The January, 1985, issue featured an outstanding photographic rendition of Lamar Dodd's painting "Heart Surgery." In that issue, we featured two articles about surgical practice and an editorial which encouraged surgical residents throughout the state to submit scientific papers for publication in the *JMAG*. Also in this issue we featured articles about Dr. Hervey Cleckley and another concerning Dr. Lois Ellison, both of the Medical College of Georgia. The February *Journal* cover featured a seasonal "field of hearts." In this issue, an editorial for Heart Month was written by Dr. Dallas Hall, president of the Georgia Affiliate American Heart Association. The March issue featured the House of Delegates meeting in Savannah in April of this year. In April, a special issue on the Auxiliary and the Child, authored by members of the Auxiliary to the MAG, featured many articles on child abuse. Mrs. Evelyn Ward Gay, of Atlanta, served as guest editor.

Credits

Our contributing editors have been most supportive in helping us obtain and screen suitable material for the *Journal*.

The monthly contributions by Dr. Clark for his "President's Letter" have been both cogent and timely.

Mr. L. B. Storey's retirement from the MAG was regretted by many of us who worked with him. He functioned very well as business manager of the *Journal* for many years. We look forward to working with Mr. Hoyt Torras who has succeeded Mr. Storey. The Executive Committee of the Board of Directors, which also functions as our Publication's Committee, has been helpful in guiding the affairs

of the *Journal*. The Heart and Cancer pages have continued to provide us with superior copy. Our Legal Page, authored by Mr. Robert N. Berg, has kept us informed regarding timely legal commentaries.

Our artist, Richard Lyons, designed attractive covers for part of the year. In more recent months, we have been fortunate to find an outstanding free-lance photographer named Chuck Rogers, who has worked with us in creating artistically distinctive covers.

We are also indebted to those MAG members who wrote letters to the editor, many of which were published in the *Journal*. This active feedback from the readers serves as an invaluable aid to the editor. Constructive comments are always welcomed. The fine contributions and useful input by members of the headquarters staff constitute an essential element in production of each issue of the *Journal*.

Personnel

Except for L. B. Storey, there have been no changes in our personnel connected with the *Journal* in the past year. We believe that we have a winning team and expect to keep it that way.

Local Advertising

Our managing editor is continuing to assume a responsible role in the administrative aspects of the local advertising program. As of this time, income from local ads has increased approximately 10% over last year this same time.

National Advertising — State Medical Journal Advertising Bureau

Since this time last year, our billing revenues through the National Advertising Bureau have increased about 20%. A new national sales force has been in place about one year now and has turned the tide for advertising revenues. All member journals of the bureau are pleased with their increased sales activity, and we look forward to a better year coming up. Your editor continues to serve as a member on the Board of Directors of the Bureau.

Georgia Medical Political Action Committee "GaMPAC"

Beverly B. Sanders, Jr., M.D., Chairman

Politics continues to influence the course of medical care and medical practice more than any other single factor. The coordinated efforts of politically responsible physicians and legislators through GaMPAC have helped to elect legislators who are responsible and are interested in bettering the quality of life for all of our citizens. GaMPAC's success in 1984 can be attributed to many factors. MAG's strong presence at the Capitol and the continued support GaMPAC has received from MAG has strengthened our commitment to maintaining a close working relationship.

The need for Georgia physicians, through GaMPAC, to have an active part in who gets elected depends on the total physician membership to GaMPAC. These are the only monies which GaMPAC has to make contributions. The statewide average of MAG members who are members of GaMPAC is less than 20%. GaMPAC is actively recruiting membership on a continuous basis by developing programs and ideas for increased membership and motivating individual physicians to take an active role in political campaigns at every level. GaMPAC needs the support of each individual physician and of MAG in order to have the funds to elect responsible legislators. Our goal in 1985 is to increase the number of MAG members who are members of GaMPAC to 30%. We need each delegate's support and his efforts to convince his colleagues at home that GaMPAC is one of the ways in which they should participate. Not only do we need individual support but collective support as well. We the physicians of Georgia, through GaMPAC are constantly seeking to elect those candidates that will positively effect the delivery of our patients' medical care.

GaMPAC is confident that its relationship with MAG will continue to flourish and that we will begin to play a more vital role in the outcome of issues of concern to us all.

Auxiliary to the Medical Association of Georgia

Mrs. Robley D. (Ann) Smith, President

Theme for 1984-85: "Build Today For A Better Tomorrow."

Organization

There are forty-two (42) county auxiliaries encompassing 100 counties. The auxiliaries are: Baldwin, Bibb, Carroll-Haralson, Cherokee-Pickens, Clayton-Fayette, Cobb, Coffee, Colquitt, Coweta, Crawford W. Long, Decatur-Seminole, DeKalb, Dougherty, Flint, Floyd-Polk-Chattooga, Franklin, Georgia Medical, Glynn, Gordon, Gwinnett-Forsyth, Hall, Hart, Jackson-Banks, Laurens, Medical Association of Atlanta, Muscogee, Newton-Rockdale, Ogeechee River, Peach-belt, Randolph-Stewart-Terrell, Richmond, South Georgia, Sumter, Thomas Area, Tift, Troup, Upson, Walker-Catoosa-Dade, Ware, Wayne, Whitfield-Murray, and Worth.

Membership

Membership in the Auxiliary is 2,164 members as of March 12, 1985.

A statewide membership drive was conducted this year by contacting the physicians whose spouses are not auxiliary members.

As president, I visited the county auxiliaries and presented the "It's OK To Tell" Child Abuse Project. A video of the "Someone To Talk To" puppet show was shown to most auxiliaries, along with a detailed display of all child abuse materials.

Phase III of the Learning Center, "Healthy Bodies, Healthy Minds, Happy People," was emphasized. Legislation was also a key topic at each county auxiliary.

Allied Organizations Visited

Meetings attended were: AMA Auxiliary Convention in Chicago; MAG Legislative Seminar at Hilton Head Island, South Carolina; AMA Leadership Confluence in Chicago; Southern Medical Association Auxiliary in New Orleans, Louisiana; AMA Mini Confluence in Atlanta.

Materials Implemented or Continued

1. "It's OK To Tell" Child Abuse literature and video.
2. Puppet Show: "Someone To Talk To."
3. New membership brochure.
4. Auxiliary issue of the *Journal of the Medical Association of Georgia.*
5. Phase III "Healthy Bodies, Healthy Minds, Happy People" added to the educational Learning Center.
6. PULSATION newsletter continued.
7. Legislative packets for "Capitol Idea" Day were prepared.
8. Drug Abuse Prevention Library, films, books, and pamphlets distributed.
9. Eleven (11) auxiliary members appointed to MAG committees.

State Meetings and Speakers

Post Convention Executive Board Meeting was held in Atlanta, April 28, 1984.

Summer Executive Board Meeting was held at St. Simons Island, Georgia, June 25-26, 1984. Speakers were: Mr. Bill Kilgallon who spoke on "Free Enterprise"; Mr. Ken Williams and Ms. Sherry Waronker from the MAG staff who spoke on the child abuse project; Mrs. Marion Howard, Ph.D., speaking on teenage pregnancy; and representatives from Charter Medical spoke on Drug Abuse.

Winter Executive Board Meeting was held at the Terrace Garden Inn, Atlanta, November 12-13, 1984. Speakers were: Craig E. Aronoff, Ph.D., Kennesaw College, "Getting Your Message Across"; Mrs. Kemal Kutait, Southern Region Vice President, AMA Auxiliary; Mr. Ken Williams and Ms. Sherry Waronker — Child Abuse Project Update; Mrs. John G. Bates, Leadership Seminar; Mrs. Margaret Cone from the Department of Human Resources on "Fetal Alcohol Syndrome"; and Mr. Lee Rodonis, Executive Director of the Fulton County Senate Delegation, spoke on legislative issues.

Allied Health Careers Clubs of Georgia will hold an annual meeting in April. There are twelve (12) clubs, and work is being done with the 144 Health Professional Schools in Georgia.

Annual Convention will be held in Savannah, Georgia, April 26-27, 1985. Speakers will be Mrs. William R. McPhee, President-Elect of AMA-Auxiliary; Mrs. T. Edward Hill, President, Southern Medical Association; Dr. Harrison Rogers, President-elect of AMA; and Dr. S. William Clark, Jr., President of MAG.

As president, I have visited the following auxiliaries: Sumter, Coweta, Georgia Medical, Bibb, Thomas, Richmond, Crawford W. Long, Auxiliary to the Medical Association of Atlanta, Cobb, Dougherty, Baldwin, Laurens, Glynn, Floyd-Polk-Chattooga, Clayton-Fayette, Ware, DeKalb, Tift, South Georgia, Newton-Rockdale, Muscogee, Walker-Catoosa-Dade, Whitfield-Murray, Gordon, Cherokee-Pickens, Ogeechee River, and Carroll-Haralson. I have also attended membership workshops in Tift, Glynn, and Sumter counties; attended Personal Growth Seminars in Thomas and Sumter counties; attended a meeting of the Georgia Council on Child Abuse in Atlanta, and participated in a reception and press conference for the child abuse project in Atlanta.

State Projects

"It's OK To Tell" Child Abuse Project has been a joint effort this year with MAG and DHR. Auxiliaries throughout the state have been involved in the presentation of the "Someone To Talk To" puppet show. This is a live puppet show which teaches kindergarten through fifth grade children how to prevent and/or interrupt the cycle of child abuse. Auxilians also distributed bumper stickers, news releases, radio and TV Public Service Announcements. Atlanta, Macon, Savannah, Rome, and Tifton were the target areas. In the target areas alone, over 16,500 children have seen the "Someone To Talk To" puppet show. Statewide, this number jumps to over 20,000, with the show being presented over 300 times. One Auxiliary has designed and created a children's activity book entitled, "It's OK To Tell."

AMA Education and Research Foundation Fund Raising Project: $1,602.00 was raised at an auction at Winter Board Meeting, and the Christmas Executive Board Sharing Card amounted to $590.00. To date the A-MAG has contributed $16,-511.31 and contributions are still coming in.

The William R. Dancy Student Loan Fund has had contributions during the year from county auxiliaries.

Household items and funds have been contributed to the Impaired Physicians program.

Medical supplies have been donated to hospitals in Bogota, Colombia through the International Health Committee.

Two hundred eighty (280) physicians' spouses from all over the state visited with their legislators at the State Capitol on March 19, 1985.

The Med-Vote Campaign registered many physicians and their families to vote.

Doctor's Day was observed throughout the state.

Publications

Book: *The Medical Profession in Georgia 1733-1983*, written by Evelyn Ward Gay, is still selling.

1984-85 State Directory is sent to each A-MAG member. The Annual Report, which covers all county and state auxiliary activities, is published at the end of the Auxiliary year.

PULSE LINE (3 issues annually) is mailed to all members.

PULSATION (3 issues annually) is a newsletter mailed to all members.

New Membership Brochure was prepared this year for prospective members and members-at-large.

County Projects

Most of the work of A-MAG is accomplished on the county level, as the auxilians do the projects that fill the needs of their local community. Most of the auxiliaries participate in state-wide projects, but they also volunteer many hours on local projects that are as varied as the auxiliaries themselves.

The county auxiliaries are involved in programs and projects on: child abuse, drug abuse, infant seat loaner programs, health careers, health fairs, special olympics, health education — learning center, GEMS (Good Emergency Mother Substitute), immunizations, scholarship funds for health related fields, newsletters for new mothers on infant care through

health departments, SADD (Students Against Drunk Driving), fire safety, nutrition, seat-belts for school buses, programs on understanding adolescents, Baby-Buckle-Up Education Programs, Toys for Tots, Health Heart Programs, screenings for hearing and vision defects, scoliosis and hypertension testing and physical fitness screening in schools.

Mini-clinics for police officers, blood drives, volunteers for hospice, workshops on infant and maternal care, stress management programs, programs on aging, medical marriage seminars, computers, impaired physicians programs, communication skills, local and world hunger, legislation, Amity House, self-breast examination clinics, research and romance of medicine (biographical sketches of physicians), organ donations, battered women shelters, Meals-on-Wheels Programs, international health — collection of drugs and medical supplies for Bolivia, MADD (Mothers Against Drunk Driving), and Med-Vote Campaigns are some of the projects involved in by county auxiliaries.

The local auxiliaries try to stay informed of the needs in their own communities and are eager to help wherever they can. We try to be a good public relations agency for our doctors in the local community and present a very caring and positive attitude to the public.

The Committee on Auxiliary of the MAG, consisting of seven (7) physicians, has been extremely helpful to the Auxiliary.

Medical Association of Georgia Medical Student Section

L. Leon Dent, Chairperson

The MAG Medical Student Section (MSS) was officially recognized by the MAG at the annual April, 1984, meeting of the MAG House of Delegates. The MAG/MSS Executive Council is comprised of eight members: chairperson, vice chairperson, secretary, four delegates representing each Georgia medical school, and the immediate past chairperson. Our Executive Council has met five times during the year with the bulk of our efforts aimed at organizational development, membership recruitment, and increasing participation of Georgia medical students in national AMA/MSS activities.

MAG/MSS Constitution. During the past year the Executive Council has revised the MSS constitution. The revised document will be presented to the MAG/MSS Assembly for ratification and then formally presented to the MAG House for approval in April, 1985.

Membership Drive. During the month of March, 1985, each school chapter conducted a recruiting effort by hosting a reception or program to increase the visibility of the MAG. The program included a speaker and information regarding MAG activities and benefits. Handouts included membership applications with copies of the *JMAG* and other MAG publications. Students attending the programs were encouraged to sign a guest book so that the program coordinators can make follow-up contacts on interested students.

MAG/MSS Brochure. To assist us in our recruiting efforts, we are in the process of designing a brochure. The cover most likely will include the MAG logo along with the insignia of each Georgia medical school.

Newsletter. The MAG/MSS has developed a newsletter to keep students abreast of MSS activities and MAG activities of student interest. This newsletter is printed every other month and is currently received by all Georgia medical students. We are hopeful that the newsletter can be used as an adjunct to our recruitment efforts.

Pulse Monograph. At the I-84 national AMA/MSS meeting in Honolulu, the MAG/MSS sponsored a resolution resulting in the development of a 30-page special issue of *Pulse,* the national AMA/MSS newsletter. The topic of this monograph will be residency selection and the national residency match process. The monograph will be sent to all U.S. medical students.

National Student Involvement. During the past year the MAG/MSS has made tremendous progress in our efforts to increase student participation in national AMA/MSS activities. Earl Mullis (Mercer) and Mike Williams (Morehouse) have served on AMA/MSS reference committees. Georges Maliha (Morehouse) participated in the AMA/MSS States Leadership Steering Committee. Mark Litwin (Emory) serves as Editor of *Pulse,* the national AMA/MSS newsletter. Steve Dawkins (Morehouse) is the student member of the AMA Ad Hoc Committee on Young Physicians. L. Leon Dent (Morehouse) serves on the AMA/MSS Governing Council and is the MSS Delegate to the AMA House of Delegates.

As Chairperson, I wish to thank the members of the Executive Council and Steve Davis, Director of Education, for their support and involvement throughout the year. On behalf of the MAG/MSS, I also wish to express appreciation for the continued support of the MAG and its investment in the future physicians of Georgia.

Medical Association of Georgia House Officers Section

K. Kramer, M.D. Chairperson

This has been a tremendously significant year for our residents' section. Our list of achievements tells why:

1. Residents' meetings held in Augusta, Atlanta, Macon, and Columbus;
2. Election of residents' steering committees to oversee organizational activity in each of these locations;
3. Allocation of $4,000 in the MAG Board of Directors to fund residents' organizational meetings and statewide mailings;
4. First *MCG Residents' Newsletter* published;
5. First-ever representation from MAG to the AMA Resident Physician Section meetings, in Chicago and Honolulu — with funding by the MAG;
6. Appropriation by the MAG Executive Committee of travel funds for residents to attend and participate in the 1985 MAG House of Delegates;
7. Residents' luncheons at the MAG Scientific Assembly and Leadership Conference;
8. Our first election of statewide officers for our resident physician section.

There's more to come. We plan a quarterly newsletter, a statewide membership recruitment mailing, "how to start your practice" workshops, orientation programs for interns, and lots more.

We're indebted to a lot of people for all these achievements. Most of all, we wish to thank President Clark, the MAG Executive Committee, and the members of the Board of Directors for supporting us and encouraging our growth.

We have much to do, still. But our resident physicians' section is now solidly founded and headed by energetic resident leaders. Watch our progress!

AMA Delegation

C. Emory Bohler, M.D., Chairman

Delegate's Report — 1984 Interim Meeting of the AMA House of Delegates

Introduction

- The AMA House of Delegates met in Honolulu on December 2-5, 1984.
- There were 367 delegates seated:
  —293 delegates representing state medical associations,
  —65 delegates representing national medical specialty societies, and
  —9 Section and Service delegates representing medical students, medical schools, resident physicians, hospital medical staffs, Army, Navy, Air Force, USPHS, and the Veterans Administration.
- Two new societies were granted voting seats in the House at this meeting. They are:
  —American Group Practice Association
  —American College of Legal Medicine
- *Address of the President.* Declaring "Enough is enough!", AMA President, Joseph F. Boyle, M.D., said that organized medicine must oppose the Reagan Administration efforts to further cut health care spending. While pledging support for efforts to curb increasing health costs, he said that "we can generate more enthusiasm and cooperation from our colleagues, and indeed do a better job, without new doses of the kinds of remedies the Administration and the Congress have been dispensing.
- No single issue dominated the discussion. There were, however, a number of issues that have far-reaching implications for the profession and the health and safety of the American public.

Highlights of the Interim Meeting

Boxing

The House considered four resolutions calling for opposition to the sport of boxing.

The House combined these resolutions into a clear statement that places the Association in the forefront of organizations calling for a total ban on boxing. This issue received much national media attention.

Chelation Therapy

Another timely issue involves use of chelation therapy. The House spent much time in developing a policy statement on this controversial treatment.

The policy reads as follows:

RESOLVED, AMA reports show that there is no scientific documentation that the use of chelation therapy is effective in the treatment of cardiovascular disease, atherosclerosis, rheumatoid arthritis, and cancer; and be it further

RESOLVED, that if chelation therapy is to be considered a useful medical treatment for anything other than heavy metal poisoning, hypercalcemia, or digitalis toxicity, it is the responsibility of its proponents to (a) conduct properly controlled scientific studies, (b) adhere to FDA guidelines for the investigation of drugs, and (c) disseminate results of scientific studies in the usually accepted channels.

Professional Liability

The House approved two progress reports on the Association's activities in professional liability.

One report presents the results of the AMA's Committee on Professional Liability's study of costs, tort reform, and other aspects of this complex problem. The committee was established in 1982.

Another report was on the activities of the Special Task Force on Professional Liability established by the Executive Vice President last June. The Task Force's purpose is to coordinate, prioritize, and expand the AMA's activities in the professional liability area.

Public Image of Physicians

Concern for negative public opinion toward physicians was uppermost in the minds of the delegates.

The House approved a comprehensive and thoughtful report on the Association's current activities and plans for improving the public image of physicians.

The report noted:

- "Organizational efforts to improve the public image of physicians are inherently limited and can never replace the actions of individual physicians committing themselves to spending more time with patients, giving them better instructions, and discussing their fees."
- Public perceptions take many years to form, and since the problem has been developing for a long time, it will not be solved quickly.
  —Public perceptions of physicians are often inconsistent, and at times contradictory depending upon the background and experience of the individual.
  —Public expectations, another image issue, are often unattainable.

In addition to the above report, the House adopted a substitute resolution formulated by the Reference Committee. It called upon the AMA to:

- Strengthen its efforts to increase the public's awareness that physicians are patient advocates.
- Develop and implement an immediate program to focus on increasing the public's understanding of key changes that are occurring in health care delivery and the impact that such changes will have on health care quality and access.
- Plan a long-range national public education campaign utilizing consultants with established reputations.
- Provide assistance and encouragement to state and county associations to develop and implement similar public awareness programs and monitor and evaluate such programs for their effectiveness.

Benefits of Unified Membership

The House approved several rec-

ommendations of the Board of Trustees providing additional benefits to members in unified states. The new benefits are designed to encourage and retain unification. Currently, only Oklahoma and Illinois are unified states.

The new benefits include:

- Services of an AMA ombudsman within the organizational structure.
- Ten percent dues discount for members, excluding students and residents.
- Staff services for special projects.
- Special briefings for officers of unified societies.
- A special Advisory Committee to meet regularly with the Executive Committee of the Board of Trustees and the EVP.
- A higher reimbursement rate to constitute societies for dues collection.

Also, the House asked the Board of Trustees to study alternative mechanisms to provide membership incentives for all states, county, and specialty societies who have successful recruitment programs.

AMA Budget

The House approved a Fiscal Year 1985 budget based on operating revenues of $126,430,000 and operating expenses of $124,580,000, with an anticipated favorable balance of $1,850,000. Incorporating an AMACO gain of $670,000 and a provision for income taxes of $930,000, the anticipated revenue in excess of expense is $1,590,000.

There is no dues increase for 1985.

Before the House considered the budget, the Reference Committee cautioned the delegates that the $1.6 million is a narrow margin and about 1% of the total budget. It imposes severe limitations on the growth of activities that can occur in the year ahead without additional revenues or displacement of existing activities.

Peer Review Organizations

The House considered six resolutions regarding various aspects of HCFA's implementation of PRO. There were several speakers who emphasized the difficulties of negotiating realistic performance objectives in the PRO contracts. Also, the delegates complained about the inappropriate emphasis on cost constraint rather than the quality of services provided.

The House directed the AMA to:

- Continue its support for professionally directed programs of medical peer review which places the emphasis on quality rather than cost.
- Actively oppose HCFA's use of arbitrary admission and quality objectives in the activities of PRO.
- Implement a PRO monitoring system to obtain documentation necessary to redress PRO implementation problems through legislative and regulatory means.
- Urge the Federation to collect and provide information to the Association.
- Actively seek legislation to correct demonstrated inequities in the implementation of the PRO program.

Opinions of the Judicial Council

The House discussed and approved a number of ethical issues in considering four important reports from the Judicial Council.

1. "Physician-Patient Relationship: Respect for Law and Human Rights" which prohibits illegal discrimination in the physician-patient relationship.
2. "Terminal Illness — Patient Preferences" which relates to "living wills" authorizing withdrawal from life support systems when the patient is irreversibly terminally ill.
3. "New Medical Procedures" which states that physicians have an obligation to share their knowledge and skills and to report the results of their research.
4. "Surrogate Parenting" which urges couples with infertility problems to investigate the alternatives available to them, including adoption. The Judicial Council believes that surrogate motherhood presents many ethical, legal, psychologic, societal, and financial concerns and does *not* represent a satisfactory reproductive alternative for people who wish to become parents.
5. "Hospital-Physician Risk-Sharing Arrangements under DRGs" which advises that physicians may not derive a profit, nor be financially penalized, nor risk loss of hospital privileges under profit or loss sharing agreements.

Hospital Medical Staff Section

With increasing maturity and sophistication, the Hospital Medical Staff Section continues to grow in influence within the House of Delegates. The HMSS at its fourth assembly meeting grappled with the problems of physician-hospital relations.

Over 400 representatives attended and submitted 14 resolutions to the AMA House. Virtually every state and territory was represented, and the delegates learned that 31 state medical associations have created similar sections to deal with these issues at the local level.

Medical Acts by Unlicensed Individuals

The encroachment of non-physicians into the practice of medicine stimulated four resolutions and much debate in the House.

Although AMA policy on the issue was reaffirmed, the delegates called for more aggressive actions, including:

- Monitoring legislative and regulatory activities.
- Disseminating information concerning such activities as expeditiously as possible.
- Developing a pro-active program to provide AMA legislative and staff support to assist state medical and specialty societies in their efforts to oppose enactment of new legislation which authorizes independent practice of medicine by individuals who are not licensed to practice medicine and surgery in all its branches.

AMPAC Year-End Report

The American Medical Political Action Committee (AMPAC) enjoyed a record-breaking year in 1984, AMPAC Chairman Fred J. Rainey, M.D., told the AMA House of Delegates.

During the 1983-84 election cycle, Dr. Rainey said, AMPAC participated in 578 campaigns, with a 90% success rate. He noted that this included support for 233 Democrats and 345 Republicans, proving the bipartisan nature of the organization and demonstrating that "party labels have no place in our decisions."

Dr. Rainey also said that AMPAC membership now stands at a record 55,500, and that the organization had raised some $3.7 million in campaign funds in 1983-84, up from $3.2 million in the previous election cycle.

Conclusion

AMA House meetings provide a unique educational opportunity, and I would encourage you to attend and participate. Any member of the Association may present testimony at the Reference Committee hearings and, of course, corridor discussions on the issues provide ample opportunities to get your views across.

If you can't come to the meeting, you can still be represented through your delegate. Let your delegation know your opinions. You can also prepare a resolution and request that it be submitted to the House.



Representing MAG Mutual Insurance Company at the Annual Session are (L to R) Tom Gose, Executive Vice-President; Charles D. Hollis, Jr., President; Keith Leaney, from Lloyds of London; and Bert Franco, Director of Marketing.

Judicial Council

C. Emory Bohler, M.D., Chairman

MAG's Judicial Council did not meet in 1984-85. Requests for changes in membership status were handled by staff at the administrative level and did not involve the Council directly. No appeals were brought before the Council, nor any matters in which the Council has original jurisdiction.

MAG Mutual Insurance Company

Charles D. Hollis, Jr., M.D., President & Chairman of the Board

There would be no MAG Mutual Insurance Company were it not for the Medical Association of Georgia.

MAG Mutual's success as a company is really the success of MAG. It is testimony to the tremendous things that we as physicians can accomplish when we put our minds, hearts, and hands to the task.

All Georgia physicians, not just our policyholders or just the MAG membership, have benefited and will continue to benefit from the efforts of MAG and MAG Mutual. We are used to paying the freight for others who are content to sit on the sidelines and watch — who watch while we fight the battles that must be won if we want to be able to assure our patients that they get the best care humanly possible.

MAG Mutual was not started overnight, and the battles that we must fight will not be won overnight. Tort reform that will lead to meaningful changes in our judicial system will require a lot of hard work for years to come. The successes we have attained are thus significant — a maximum five year statute of limitations; a change in the dismissal and refile rule; stronger support for structured settlements; peer review immunity; and elimination of jury duty exemptions. They would not have been possible without a concerted and well orchestrated effort by MAG's Legislative Committee, chaired by Jim Kauffmann and manned by Rusty Kidd.

Truly, we have only just begun to fight. More important battles lie ahead and MAG and MAG Mutual must remain united in a commitment to change other aspects of our tort system.

The reasons for continuing these efforts are now the subject of conversation wherever doctors gather. Insurance premiums have doubled in a little more than one year. Furthermore, physicians, especially in high risk specialties, are drastically changing their practices. These changes may affect the care our patients get and that concerns us.

MAG Mutual has a tremendous responsibility to provide for a stable professional liability market in Georgia. We never thought this would be easy. If we had, MAG Mutual would never have been formed. And that is an alternative none of us could afford.

1984 Results

Physicians Insured — 2,689
Applications not Insured (Since Inception) — 150
Assets — $21,000,000
Written Premiums — $15,400,000
Invested Assets — $16,200,000
Yield on Investments — 11%
Open Claims — 500
Claims Paid — 26
Amount Paid — $2,277,892
Amount Reimbursed by Reinsurers — $1,132,248
Reserves for MAG Mutual Open Claims (95% of earned premiums) — $13,350,146
Eventual Anticipated Total Losses on a Case by Case Basis — $19,700,000
Reinsurers' Portion of Anticipated Losses — $5,100,000
Surplus — $2,535,087

Access to Medical Care Committee

M. Julian Duttera, Jr., M.D.

Physician Recruitment Program

By December 15, 1984, the MAG Physician Recruitment Program had established physician recruitment committees in 10 north Georgia communities. Eight physicians have already been recruited by these communities; several communities are interviewing prospective recruitees;

and 10 new communities are now organizing committees to recruit doctors.

At the end of the first contract year with the Appalachian Regional Commission, MAG had expended 60.7% of available funds for direct costs; 20.5% for overhead costs; and 18.8% has been carried over into a second year. The Appalachian Regional Commission has awarded MAG an additional $54,000 for the second year.

As a special project, MAG staff has assisted the town of Maysville (Banks county) in the development of a grant proposal for the construction of a primary care facility and the recruitment of a physician. With the support of the Jackson-Banks Medical Society, the "Maysville Project" is being offered as a model of how local physicians, a community hospital, elected officials, and concerned citizens can design a medical care system to meet the needs of their community.

The MAG Physician Recruitment Program also sponsored a successful conference on "Physician Recruitment in Appalachia Georgia: Old Problems and New Approaches" on June 7, 1984, in Rome, Georgia. Members of the Floyd-Polk-Chattooga County Medical Society and representatives of the Family Practice Residency Program at Floyd Medical Center served as faculty for the one-day conference. An important outcome of the meeting was the recommendation for a regional advisory council to be formed to assist in the development of a long-term medical manpower plan for north Georgia. This council, appointed by the Committee on Access to Medical Care, will hold its organizational meeting at the second north Georgia conference now scheduled for May 29-30, 1985, at the Unicoi State Park, Helen, Georgia.

Medical Fair and Pre-Practice Seminar

There has been some conflict during the past year among some of the sponsors of the annual Medical Fair and Pre-Practice Seminar. From a programmatic perspective, the source of this conflict stems from these factors: (1) the various physician placement programs in Georgia have differing criteria to guide their placement activities; (2) the criteria used for physician placement on a day-to-day basis do not necessarily translate into workable rules for a 2-day Medical Fair; and (3) attempts to *coordinate* day-to-day placement activities by some Medical Fair sponsors is perceived by others as an attempt to *control* the Medical Fair. This latter problem can only be resolved at the policy-making level of each Medical Fair cosponsor, and it is anticipated a resolution will soon be forthcoming.

In the meantime, planning for the 1985 Medical Fair and Pre-Practice Seminar (October 17-18, Augusta Hilton) continues to proceed smoothly and harmoniously among the seven cosponsors. Of significant importance has been the fusion of the "Medical Fair Orientation" sessions with the conference-model established by the MAG Physician Recruitment Program last June in Rome. As it now stands, "The North Georgia Conference on Physician Placement and Medical Fair Orientation" will take place (as previously mentioned) at Unicoi State Park, May 29-30, and it will be preceded by "The South Georgia Conference . . ." at Macon on May 23, 1985. The significance of the "North" and "South" conferences is (1) the Medical Fair has been strengthened by establishing regional bases of support; (2) new ideas and new methods of physician placement have been incorporated into the Medical Fair structure; and (3) the foundation has been laid to adjust the Medical Fair concept to accommodate the shift in medical manpower supply and demand.

Physician Placement Service

The number of physicians seeking employment opportunities in Georgia continues to increase while the number of opportunities has begun to show a decline. To adjust for this shift in demand, the computerized Physician Placement Service has been modified with these changes: (1) the management of the service has been simplified, i.e., there are now six bimonthly "Master Lists" of physicians and opportunities; (2) the fee-for-service has been increased to $25 for a 6-month subscription; and (3) accessibility has been improved since one Master List can be purchased for $10. The net result of these changes has been an increase in revenue, a reduction in administrative costs, and an improvement in the quality of service.

As a supplement to these basic program modifications and as a means to increase marketability of the Physician Placement Service, initial contacts have been made with residency training programs at MCG and Emory. The purpose of these explorations is three-fold: (1) to establish a contact person at each residency program to answer questions, offer advice, etc.; (2) to identify pools of qualified specialists and potential candidates for placement in Georgia; and (3) to begin the process of establishing placement standards for each of the non-family practice specialties. The responses from MCG and Emory have been quite positive. In addition to these preliminary contacts with residency programs, staff has also contacted the Georgia Hospital Association about possible linkages with GHA's member institutions. Although no formal relationships have been discussed, the possibility of MAG's Physician Placement Service acting as broker between the residency programs and 75% of the hospitals in Georgia offers an attractive, cost-effective alternative to the numerous for-profit (i.e., headhunter) agencies operating in the state. Other existing networks — HMOs, hospital chains, public clinics, and industries — have not been explored, but offer interesting possibilities.

Finally, MAG's Physician Placement Service is the *only* computerized placement service specifically geared to meeting the medical manpower needs of Georgia. Moreover, there is still a lack of coordination among the various agencies presently involved in the physician placement business. To illustrate, three state agencies are attempting to establish computerized placement programs of their own! The potential for greater duplication of effort, increased costs, and new conflicts is, therefore, quite great. The MAG Physician Placement Service, with additional modifications and support from the physicians of Georgia, could become the means of greater coordination and the standard setter for placement activities throughout Georgia.

Committee on the Auxiliary

Robley D. Smith, M.D.

The Committee on the Auxiliary met twice this year. The first meeting was with the Executive Board of the Auxiliary (post-convention board meeting) at the Ritz-Carlton Hotel, Atlanta, April 28, 1984. The Committee met the Board members and heard committee chairmen announced.

The second meeting of the Committee on the Auxiliary was held at Sea Palms on St. Simons Island on June 2, 1984. The following plans were discussed and approved by the Committee:

1. Child Abuse Program in cooperation with the Medical Association of Georgia. Puppet show "Someone to Talk To" was approved and has been shown in schools throughout Georgia.
2. Learning Center — Phase III — "Healthy Bodies, Healthy Minds, Happy People." Portions of the Learning Center have been purchased by several auxiliaries.
3. Drug Abuse Prevention Program. Several auxiliaries have had drug abuse programs and have done programs in their local schools.
4. Shape Up For Live, an AMA Auxiliary project with emphasis on pre- and postnatal care. They have had two programs on the subject this year, one at the Summer Board and one at the Winter Board meeting.
5. Legislation — Planned a Day at the Capitol. This was done on February 19, 1985, with 280 doctors' spouses gathering in Atlanta for a coffee at the Governor's mansion with Mrs. Harris, and a visit to the State Capitol, with the respective legislators.
6. AMA-ERF to raise funds through Christmas sharing cards, gift wrapping paper sales, and auctions. This has been done throughout the state.
7. William R. Dancey Student Loan Fund. Money has been collected through individual gifts and memorial donations.
8. Allied Health Careers. This project has been continued this year.
9. International Health. Samples and out-dated medicine and medical supplies are gathered and collected at convention to be sent to Bolivia.
10. Impaired Physicians Project. Items for the halfway houses and donations of money have been collected during the year.
11. Auxiliary issue of the *Journal of the Medical Association of Georgia*. This issue has been completed and will be the April issue.
12. The Advisory Committee also approved the following dates for our State meetings: Summer Board, St. Simons Island, June 17-20, 1984; Winter Board, Atlanta, November 12-13, 1984; and State Auxiliary Convention, Savannah, April 26-27, 1985.
13. New membership brochure. Mailed to prospective members in November, 1984.

Building & Land Committee

H. Duane Blair, M.D., Chairman

The Building and Land Committee reports that MAG negotiated a lease for rental of the downstairs portion of MAG headquarters to the Greater Atlanta Coalition on Health Care, Inc. The annual rental under this lease is $20,000 for approximately 2,000 square feet of office space. MAG will incur a substantial profit from this transaction, since total out-of-pocket cost associated with the lease was less than $5,000.

While MAG intends to minimize building expenses during the next few years, it was necessary to replace a chiller to insure sufficient cooling in the front portion of the building. The cost of this replacement was $8,542, well within reason for a building constructed 30 years ago.

In 1984, MAG made the final payment for the mortgage on the headquarters building. This puts MAG in the enviable position of having a "debt free" asset, whose value, judging from renovations and new construction in the mid-town area, increases daily.

The Committee will continue to assess real estate values in the area so that a decision can be made on the advantages of retaining or selling the building. In this respect, the Committee is evaluating the appropriateness of proposals whereby MAG Mutual would buy the headquarters and enlarge it to provide adequate space for MAG, MAG Mutual, specialty societies, the Georgia Medical Care Foundation and other related entities. At the appropriate time, the Building and Land Committee will make a recommendation which is in the best interest of the Association.

Computer Advisory Committee

John D. Watson, Jr., M.D.

I first wish to thank the members of the Committee for their good advice and assistance. Of the most rapidly progressing and changing technologies, few compare to the computer. This marvelous electronic device can write our letters, handle millions of bits of analytical data, balance our check books, and even dole out money to us from our bank account.

Fortunately these devices are becoming ever more compact and faster in their processing capability.

Over the past year, the MAG data processing capability has made a significant advancement into required communication needs. The Medical Association of Georgia has among its charge data services and information to its members. These demands will grow and become more complex, and we believe we are now improved to a state to meet these demands. The Communication-Data-Services arena will continue to be very dynamic and fluid. This area will require vigilance, management, flexibility, and support. Your Committee will do its best to provide this surveillance and guidance.

Committee on Computer Education

William M. McClatchey, M.D., Chairman

The MAG Committee on Computer Education was created last year

to oversee the Association's marketing activities for the AMA/GTE Medical Information Network; and as

part of those activities to conduct programs to educate physicians on the application of computers in the medical office.

We've met twice, with hearty participation by each member of the Committee.

I. *AMA/GTE Medical Information Network*

Our marketing of MINET among Georgia physicians has been hampered by several factors, of which we have become aware this past year:

A. The majority of physicians are generally unaware of the hardware needed to access a database. At county medical societies meetings, our references to "dumb terminals with modems" have drawn more blank stares than informed nods. The Committee assumed a responsibility to educate our colleagues about hardware. For instance, we approved an all-member mailing to distribute information on the equipment that a doctor must purchase in order to subscribe to MINET. We decided to avoid endorsing just one product, in favor of several terminals whose quality we could vouch for. We researched several of these simple terminals, but found that for their price — $1200 to $1400 — a physician could just as well purchase a personal computer. And because of the wide range of these latter products, we have refrained from distributing any information on hardware.

B. A second problem we faced with MINET involved some misgivings about the quality of the service, specifically of the clinical information provided on-line. We learned that the President of the Florida Medical Association, Dr. Lee Dockery, became so concerned over the scientific quality of the disease information database of MINET that he wrote Dr. Sammons of the AMA, suggesting that the database information was not current, and that the database should possibly be deleted. Dr. Dockery noted that Florida physicians had found the other databases to be of good quality.

C. A frequently heard complaint from other state medical associations was that the GTE headquarters staff in Vienna, Virginia, failed to provide the support needed for a vigorous marketing effort among physicians. The Tennessee Medical Association dropped its distributorship for this reason; complaints about GTE's lack of support surfaced at every meeting on MINET which the AMA called for state association staffers.

D. But the most vexing irritation we faced in dealing with GTE involved its billing to MAG. In March of last year, when GTE began billing us as distributor, we noticed a $295 monthly minimum charge. We found that this sum was not mentioned in our distributorship contract, nor did we remember being told about it before we signed our contract with GTE. We therefore began writing GTE, asking for an explanation and stating that we would not pay this disputed fee until we received a satisfactory answer. In October, 1984, when we learned that the $295 fee had been in place at the time of our contract signing, our Committee determined to start paying the "monthly minimum," but that we would not pay it retroactively. The MAG Executive Committee endorsed our position on last November 18. On February 6, 1985, GTE's national manager called MAG staff and warned that our contract would be terminated if the disputed back payment was not forwarded. In view of the positions taken by both the MAG Computer Education Committee and MAG Executive Committee, I felt we had no recourse but to allow termination of the contract.



(Left): Past President Carson B. "Bucky" Burgstiner, of Savannah, in conversation with another Past President, Fleming L. Jolley, of Sea Island.

As of February 7, 1985, therefore, our responsibilities for marketing MINET have ceased.

But other activities remain for our Committee, such as:

II. *BRS/Saunders Colleague*

The Committee is aware of other medical information data-bases besides MINET. One excellent one is "Colleague," which is produced by BRS/Saunders Medical Knowledge Resources. We voted to enter into contract with BRS/Saunders to inform Georgia physicians of "Colleague," on the condition that our contractual responsibilities would not lead to any expense by MAG. The Executive Committee approved this proposal last November.

As of this writing, our contractual discussions with BRS/Saunders are nearly completed, and we expect a satisfactory document to be ready for us soon.

III. *GaIN*

We also would like to help spread the word on the Georgia Information Network, which is centered at Mercer

University. GaIN will make information from the NIH/National Library of Medicine (eg., Medline searches) available through computerized databases. We have offered to help GaIN in informing physicians of the service. One example of our support is the MAG Annual Session Committee's decision to offer space for a GaIN exhibit at this House of Delegates.

On these several fronts we intend to press forward.

As Chairman of this Committee, I wish to thank the members for their support: Edward D. Biggerstaff, MD, Savannah; Alan D. Clark, MD, Alpharetta; Floyd P. Garrett, MD, Atlanta; William M. Headley, MD, Milledgeville; Richard C. Mattison, MD, Atlanta; Jack F. Menendez, MD, Macon; and James H. Sullivan, MD, Columbus.

Committee on Continuing Medical Education

John A. Harrel, Jr., M.D., Chairman

This year the MAG Committee on Continuing Medical Education has maintained its strong reputation for efficiency and solid performance. The Association is fortunate to have such a group of physician workhorses as we have on this Committee.

INTRAV

At last year's House of Delegates, we called attention to the need for more effective review by this Committee of the continuing medical education seminars being offered by INTRAV with its vacation trips. The house resolved that

the Medical Association of Georgia shall continue its cosponsorship of the MAA-MAG INTRAV excursions provided the Education Committee has the opportunity for significant input and prior approval of the scientific program.

To effect this "significant input," we appointed one of our Committee members, Dr. Roland Summers of Savannah, as our liaison with INTRAV. Since then, INTRAV has dutifully sent him prepublication notices of seminars planned for abroad. In each case, Dr. Summers has determined that the seminar content is appropriate for the respective Category of CME credit which INTRAV plans to announce.

While this review mechanism may not afford us the opportunity for "significant input," it nonetheless certainly meets the definition of "prior approval." Moreover, we are pleased to note that before signing his name to an MAA-MAG letter promoting the latest INTRAV excursions, Dr. Clark had staff make sure that Dr. Summers had reviewed the seminar programs that will be offered along with the trips.

I think it also important to point out that within our Committee there remains a degree of dissatisfaction with the quality of some of the "Category 2" seminars, and with INTRAV's almost casual manner of informing prospective trip-takers of the CME they'll receive. For the time being, though, our Committee is pleased that the review process, called for by last year's House, seems to be working.

Accreditation

Our main job as a Committee remains advising and accrediting Georgia organizations and institutions which provide continuing medical education. In the past year, we've resurveyed seven hospitals and four state or local specialty societies and extended their period of accreditation according to their ability to meet the ACCME *Essentials* for Category 1 continuing medical education. We've also conducted an initial survey visit to Glynn-Brunswick Memorial Hospital, which seeks accreditation from MAG as a provider of Category 1 CME.

As of this writing, 16 specialty societies and 20 hospitals in the state are accredited for CME by the MAG. They are:

American Academy of Pediatrics, Georgia Chapter
American Cancer Society, Georgia Division
Americus/Sumter County Hospital
Athens General Hospital/St. Mary's Hospital
Atlanta Society of Pathologists
DeKalb General Hospital
Georgia Academy of Family Physicians
Georgia Academy of Family Physicians Educational Foundation
Georgia Baptist Medical Center
Georgia Gastroenterologic Society
Georgia Affiliate, American Orthopaedic Society
Georgia Affiliate, American Heart Association
Georgia Psychiatric Association
Georgia Radiological Society
Georgia Rheumatism Society
Georgia Society of Anesthesiologists
Georgia Society of Ophthalmology
Georgia Surgical Society
Greater Atlanta Otolaryngology/Head and Neck Surgery Society
John D. Archbold Memorial Hospital
The Medical Center
Medical Center of Central Georgia
Memorial Medical Center
Metropolitan Hospital
Northeast Georgia Medical Center
Northside Hospital
Phoebe Putney Memorial Hospital
Piedmont Hospital
Scottish Rite Hospital
South Fulton Hospital
Southeastern Angiographic Society
St. Joseph's Hospital
Tanner Memorial Hospital
University Hospital
VA Medical Center
West Paces Ferry Hospital

All this work couldn't be done were it not for an impressive group of energetic physicians who are committed to ensuring for the Medical Association of Georgia an influential role in continuing medical education. They are: Glen E. Garrison, Augusta; T. Schley Gatewood, Jr., Americus; John A. Hudson, Macon; Thomas D. Johnson, Albany; Robert M. Kolodner, Decatur; James S. Maughon, Atlanta; Victor A. Moore, Augusta; Hiliary R. Newland, Athens; Neil G. Perkinson, Atlanta; Carl L. Rosengart, Savannah; George W. Shannon, Columbus; Barry D. Silverman, Atlanta; Mark E. Silverman, Atlanta; Rodney L. Smith, Gainesville; Roland S. Summers, Savannah; and William H. Whaley, Atlanta.

Cost Awareness Committee

Virgle McEver, Jr., M.D., Chairman

During the year 1984-1985, the Cost Awareness Committee conducted a seminar entitled, "Local Initiatives in Cost Efficient Health Care," held in Macon on July 26. An audience of 60 physicians, businessmen, and hospital administrators heard presentations on tort reform, utilization management, benefit design, alternative delivery systems, and economic grand rounds.

The meeting was successful — it received high evaluations from the attendees, and the physicians in attendance received two CME credit hours. Similar conferences are planned for 1985-86, and funds have been requested in the FY 86 budget.

Finance Committee

Cyler D. Garner, M.D., Chairman

Note: Budget development for 1985-1986 is not completed at this time. This report summarizes MAG's financial position and discusses pertinent facts of interest to delegates. A more detailed report will follow shortly.

The April, 1984, House of Delegates approved a budget with an excess of expenditures over revenue of $123,783 for fiscal year 1984-1985. As we progressed through the year beginning June 1, 1984, it became apparent that the budget adopted may have been somewhat optimistic. Briefly some of the reasons for this statement follow:

- The budget as adopted did not include some $51,000 in expenditures for depreciation and maintenance of the computer equipment purchased to fulfill PRO requirements.
- Interest income had been budgeted based on prior years when MAG's cash balance was substantially higher and interest rates were 1.5 to 2.5 percent greater than current levels.
- Computer revenue was budgeted at a level which anticipated some 380,000 Medicare discharges for PRO processing. More recent projections indicate discharges will be closer to 280,000. Thus, computer revenue was over projected by some $62,500.
- In October, a special called session of the House of Delegates adopted a resolution which called for the development of a business plan which could lead to the formation of a statewide physician organization. The costs associated with the meeting in October, consultant and legal fees, staff travel to county medical societies, and the like were not anticipated during last year's budget process.
- MAG Mutual has reduced funds budgeted for payments to MAG.

These, along with other revelations that have occurred this year, could have resulted in a deficit substantially larger than the $123,783 budgeted. However, I am pleased to announce that as of the date of this report, it appears MAG has completely restructured its financial position, and, in fact, current projections indicate we will end the year with a small excess of *revenue* over expense.

Taken by itself, the projected surplus seems small. But, in view of the earlier portions of this report, this surplus represents a giant step toward fulfilling the organizational goals and objectives we set upon taking office.

With the change of Executive Directors, MAG reorganized staff functions to improve efficiency. Savings in total salaries were achieved while continuing to provide a comparable level of service. The Data Processing Department has been reorganized with the goal of improving the usefulness of operation to its users. Our computer system is handling PRO requirements.

We are changing banking arrangements to take advantage of new opportunities. We are rebidding long-standing service contracts to assure MAG is obtaining the best service for the dollars expended. Pay raises for the coming year will be based upon merit to reward those employees contributing to the goals of the Association.

Additionally, we have initiated a membership drive which shows every indication of substantially increasing MAG's membership. Our PR Committee has produced a nationally acclaimed campaign to prevent child abuse. MAG is studying a physician organization which could help preserve highly desirable aspects of medical practice in today's environment. And, we have taken the necessary steps to insure that MAG is in a financial position to continue in this mode in the coming years.

In February, the Finance Committee met to review requests and develop the 1985-1986 budget. We will meet again April 13, 1985, to finalize budget recommendations. At this time, I am confident the 1985-1986 budget will provide a substantial surplus which will help build MAG's cash reserves to the desirable level. The recommended budget will put MAG in a strong financial position to insure that your Association will continue to operate in the best interest of our member physicians.

Committee on Health Education

S. Boyd Eaton, M.D., Chairman

Background

The MAG Committee on Health Education was created last year by our House of Delegates. The 1984 House also gave us our principal mission by passing Resolution 29, which directed that

the appropriate committee of MAG develop recommendations for a health promotion and disease prevention program, and that MAG communicate these to the State Health Plan Development Committee so that this committee will have meaningful input from the practicing physicians of Georgia.

Last May, the Executive Committee of MAG determined that, in my capacity as Chairman of the Plan Development Committee of the State Health Policy Council, I should chair the MAG Health Education Committee. Since then, we've proceeded apace.

Activities

Our first activities stemmed from an informal meeting, held last May 31, with 20 to 25 representatives of DHR, voluntary health agencies, the

medical community, and other health professional groups. We discussed a wide-ranging list of possible health topics on which legislation could be introduced. Subsequent meetings and mailed questionnaires during the summer and fall led us to narrow our interest to five general headings:

— highway and pedestrian safety
— school health education
— food labeling
— insurance and business
— health and social programs

To research these issues, and to determine the feasibility of enacting legislation about them, we formed a "health promotion/disease prevention steering committee," of the State Health Policy Council — individuals representing organizations whose collective clout and moral suasion we hope would influence state legislators on health-related proposals. In several meetings, we've discussed such topics as mandatory seat belt laws, food labeling regulations, raising the drinking or driving age, and statewide school health education programs.

Two concrete proposals came to our attention which we voted to support: 1) a grant application to the Centers for Disease Control, that would develop a "clearinghouse" to review and evaluate school health education materials. The proposal also calls for the training of personnel to conduct inservice health education seminars for local teachers. (Since then, we have learned that the CDC funds originally sought are no longer available); 2) the bill, introduced into the recent Georgia General Assembly, mandating use of passenger seat belts. Of this bill, the MAG gave its endorsement by Executive Committee action last January 11. Several physicians, including myself, recently testified before legislative subcommittees as to the need for mandated seat belt use.

Proposed Action

The seat belt bill failed this session, but we intend to press again for its enactment next year. We especially plan to work with Minuard ("Mickey") McGuire and the Governor's Office of Highway Safety to educate the public on the need to increase its use of automobile seat belts. One of our thrusts will be to change the public perception *from* seat belts as a *public safety* issue *to* seat belt use as a *personal health* issue.

Defined as such, we believe that the seat belt issue — whether in public education or legislative action — deserves the Medical Association of Georgia's support as one of our significant goals for the coming year. We especially intend to rededicate ourselves to supporting passage of a bill mandating seat belt usage; such a bill will likely have stronger prospects in the next General Assembly. We expect to work hard on this and request your continued support.

Impaired Physicians Committee

Edward J. Waits, M.D., Chairman

The Impaired Physicians Committee of the Medical Association of Georgia met two times during the calendar year. At our initial meeting, the aims and objectives of the Committee for the year were outlined:

(1) Education of members of the Medical Association of Georgia through contact at the local county medical society level about the disease of chemical dependency and its effect on Georgia physicians and other health professions.

(2) Identification. Techniques of identifying impaired physicians and other health professionals at the local medical community or hospital level.

(3) Intervention. Methods of organizing intervention terms for confrontation of the impaired physicians or other health professionals.

(4) Recommendations for appropriate treatment. Discussion of criteria to be used for various treatment modalities such as conventional twenty-nine day inpatient programs, various outpatient programs offered, halfway house or recovery residency programs in conjunction with numbers one and two, etc.

(5) Aftercare. Principals involved in establishing an aftercare contract with the impaired physician and methods of monitoring the physician during this critical phase of re-entry into the professional community and practice. Length of aftercare contracts and levels of monitoring, etc.

The above objectives and goals of the committee were discussed in length at each of our meetings during the year. Lectures were given by Dr. Douglas Talbott and staff concerning the above topics. Video tapes on intervention techniques (the newest Medical Association of Georgia video tape) were presented to the committee for information and discussion.

One meeting was devoted to the concept of reconciliation of the specialties of Psychiatry and Addictionology. The upcoming conference on Addictionology and Psychiatry "Partners in Treatment" was presented by Dr. Melvin M. Udel.

Outlines for plans for the annual Advocacy Workshop were formulated during the year and the workshop was held at the Waverly Hotel on Saturday, February 23, 1985. Eighteen (18) advocates from around the state gathered for this workshop which was presented by the Impaired Physicians Committee, with the assistance of Dr. Douglas Talbott, Dr. William Farley, and patients currently in treatment. The workshop was quite successful, and it is planned that this will become an annual event gradually increasing the number of advocates present around the state. Enclosed with this report is a copy of the letter that was sent by the chairman to the advocates following the workshop.

Your committee chairman attended the following meetings during the year pertaining to impaired physicians. (1) International Doctors in Alcoholics Anonymous Annual Meeting, Minneapolis, Minnesota, August, 1984; (2) AMA Impaired Physicians Conference, Secaucus, New Jersey, September, 1984; (3) SKS Southeastern Conference on Drug and Alcohol Abuse, December, 1984; (4) Caduceus Retreat, Callaway Gardens, March, 1984; and (5) American Medical Society on Alcoholism, Detroit, Michigan, April, 1984.

At the January meeting of the Impaired Physician Committee, a concept of selecting a new Medical Director for the Impaired Physicians' Program was presented by Doctors Talbott and Waits to the Committee. It is felt that the Director of this program should work independent from any treatment facility and not be involved in any treatment facility and any financial affiliation. This funding

for the salary and staff of such a Director could possibly come from a fee placed on the medical license and/or with the major insurance companies; thus alleviating the Medical Association from this expensive item in its budget. This concept will be further studied and discussed with the Executive Committee and the Board at a later date.

Three new members were added to the committee during the previous calendar year and they are: Dr. Scott James, Atlanta; Dr. Tom Douglas, Brunswick; and Dr. Charles Underwood, Marietta.

Committee on Legislation

James A. Kaufmann, M.D., Chairman

The 1985 Georgia General Assembly ended its 40-day working session Friday, March 8, 1985. During the 40-day working session, 1,429 bills were introduced in the Georgia House and Senate. Twelve percent of these bills had to do with the medical system for which MAG took an interest and followed each one from the beginning day of the session through March 8.

All bills which were not passed or specifically defeated remain on the calendar and can be voted on in the 1986 session. This is pointed out here in order to inform you, the members of the Medical Association of Georgia, that many bills for which the MAG had opposition were not specifically defeated, and we will have to contend with those bills over the summer, fall, and during the 1986 legislative session.

Obviously, a major concern to MAG during the 1985 session was tort reform legislation. Four tort reform bills were introduced as a result of the Governor's Advisory Council on Medical Malpractice. Three of these bills passed and are now awaiting the Governor's signature prior to becoming law. Two additional tort bills were introduced to which MAG had significant opposition, both of which were not passed but are still pending action before the 1986 session.

Other areas of legislation which dominated a considerable amount of time were indigent care, chiropractic scope of practice, motorcycle helmet law, and legislation dealing with the licensure or certification of currently non-regulated health care practitioners. The individual bills are alluded to by bill number and subject matter in this report.

The MAG Physician Involvement Program was again a tremendous success, and the value of our members being at the Capitol on a daily basis has a direct reflection to the success of our overall legislative program. Several county societies chose not only to send members of their societies on a daily basis to the Capitol, but also to have organized luncheon events with their legislators on one and in some instances two separate occasions during the 1985 legislative session.

The Doctor-of-the-Day program is still the most appreciated program that is provided to the members of the Georgia General Assembly and their staff. Ms. Pamela Acree was again our nurse and did another outstanding job not only as our nurse but also in representing you and the MAG in staffing the Medical Aid Station.

Your Legislative Committee plans to have another Legislative Seminar which is scheduled for July 19-21 at the Hyatt on Hilton Head. We again plan to have roughly ten state legislators and approximately 80-90 MAG members and their spouses in attendance.

The MAG staff assigned to the area of legislation are to be commended for their dedication to the job; 1985 more so than in years past required more hours, from early morning to late evening, by all persons on the MAG staff assigned to the area of legislation, Mr. Rusty Kidd, Mr. Gould Hagler, and Ms. Hollie Ross. All of us owe the three of them thanks for their tireless efforts during the 1985 legislative session.

1985 Legislative Issues of Major Concern

HOUSE BILL 13 — CANCER ADVISORY COMMITTEE
(Passed)

The existing Cancer Advisory Committee was amended to add new members, one from the Georgia Chapter of Health Insurance of America, one from the Georgia Nurses Association, one from the Georgia Association of Pathologists, and one from the Georgia State Medical Association.

HOUSE BILL 38 — MANDATORY SEATBELTS
(Assigned to study committee)
(Supported)

This bill introduced by Representative Dick Lane would have mandated all persons riding in passenger automobiles to wear seatbelts or face misdemeanor fines.

HOUSE BILL 112 — SPEECH PATHOLOGY/AUDIOLOGY
(Did not pass)

The original bill introduced at the request of the Speech Pathology/Audiology Board passed the House of Representatives and was amended by the Georgia Senate. The Senate amendment specifically stated that nothing contained in the Speech Pathology/Audiology Licensing Act could restrict a physician delegating to his employee the right to do a hearing test for which the physician assumed full responsibility and liability for the acts of said employee. The Senate amendment was not accepted by the House of Representatives, therefore HB 112 *did not pass* in 1985, but is still pending action by the 1986 legislature.

HOUSE BILL 156 — CHIROPRACTIC SCOPE OF PRACTICE
(Assigned to study committee)

This bill, which passed the House of Representatives, MAG did not oppose. The bill then went before the Senate Human Resources Committee. The Committee, after three votes, decided to put the bill in *a study committee* over the interim of the 1985-86 session. The bill that passed the House would have expanded the scope of practice for chiropractic services to permit them to use physical therapy modalities such as ultrasound, galvanic and diathermy on the spinal structure, and also added a tort liability clause which stated that chiropractors when performing the same services as licensed medical doctors had the same liability and had to adhere to the same standard of care.

HOUSE BILL 180 — PHYSICAL THERAPISTS
(To be studied)

The purpose of HB 180 was to amend the physical therapy licensure act to remove the word "consultation" which would then permit physical therapists to initiate treatment without any consultation prescription or referral by M.D.s or other appropriately licensed health care practitioners. MAG opposed HB 180. This bill *will be studied* by the House Health & Ecology Committee over the summer and fall.

HOUSE BILL 187 — RADIOLOGIC TECHNICIANS
(Assigned to study committee)

This bill as introduced would have established registration for X-ray technologists under the Composite State Board of Medical Examiners. If HB 187 had passed, it would have restricted the use of X-ray machines to only X-ray technicians registered by the Composite State Board of Medical Examiners or other appropriately licensed persons such as, *the* M.D., *the* dentist, *the* chiropractor, or *the* podiatrist. HB 187 would have specifically denied the right of the physician or other appropriately licensed practitioner to delegate to their employee the right to take an X-ray under their supervision and/or liability. HB 187 was put in the House Health & Ecology Committee study committee.

HOUSE BILL 255 — CORONERS' QUALIFICATIONS
(Passed)

This bill *passed* which establishes educational and other criteria prior to an individual becoming a coroner in Georgia. Under this Act, coroners would be elected and/or commissioned and would hold this office for 4 years. No person shall be eligible to become a coroner unless they are a citizen of the United States, a resident in the county for at least 2 years, a registered voter, at least 25 years of age, obtained a high school diploma or its equivalent, never been convicted of a felony offense or any offense involving moral turpitude, and said coroner shall file an affidavit with the judge of probate court swearing to his qualifications.



(Right). Vice-Speaker of the House, James A. Kaufmann, Atlanta, greets the new Executive Director of the Medical Association of Atlanta, John M. Westenberger. Beaming between them is the Speaker of the House, Jack F. Menendez, of Macon.

HOUSE BILL 256 — CORONERS' TRAINING COUNCIL
(Passed)

This bill, as *passed,* creates the Georgia Coroners' Training Council Act. The purpose of this council is to establish rules, regulations, and guidelines and continued education for persons who wish to seek and who are holding the office of coroner in this state. After this Act is implemented, those persons who are currently coroners would have to be certified by this coroners' council and go through continuing education courses in order to qualify to be reelected as a coroner in Georgia.

HOUSE BILL 310 — ABORTION/PARENTAL CONSENT FOR MINORS
(Assigned to study committee)

This somewhat complex and controversial bill had many hearings before the House Judiciary Committee prior to being put into a *study committee* over the interim of the 1985-86 legislative session. In essence, the bill stated that prior to an abortion procedure being performed on any person under the age of 18, that there had to be at least 24 hours notice, and that the physician had to make an effort to contact the parents of the minor by phone and if unsuccessful in doing so, then had to notify the parents in writing prior to performing the abortion procedure. One of the obvious questions raised relative to this issue is the liability of the physician, if in fact the physician is unable to contact the parents of the minor.

HOUSE BILL 329 — PHYSICAL THERAPY ACT
(Assigned to study committee)

This bill is the exact opposite of HB 180 mentioned earlier. HB 329 was an attempt to amend the law to specifically require a prescription and/or referral by an M.D. prior to initiation of treatments by a physical therapist. This bill was put into a *study committee* as was HB 180.

HOUSE BILL 476 — MASSAGE THERAPISTS LICENSURE BOARD
(Assigned to study committee)

This proposal would have created a new state licensure board for massage therapists. The scope of practice proposed is "the manipulation of the superficial tissues of the human body with the hand, foot, arm, or elbow, whether or not such manipulation is aided by hydrotherapy, including colonic irrigation, or thermal therapy, or any electrical or mechanical device, or the application to the human body of a chemical or herbal preparation." HB 476 was placed in a *study committee* of the House Health & Ecology Committee.

HOUSE BILL 483 — HEALTH CARE FACILITIES REPORTS TO SHPA
(Passed)

As *passed,* this bill requires all hospitals to report to SHPA their "total gross revenues, bad debts, free care extended, contractual adjustments, care provided under Hill-Burton commitments, charity care to indigent persons, and outside sources of funding from governmental entities, philanthropic groups, or any other source." The purpose of this act is for SHPA and the Georgia legislature to get an accurate reporting of how much free care/indigent care all hospitals in Georgia are providing.

HOUSE BILL 615 — BREAST CANCER BROCHURE
(Received no joint action)

The original bill which amended the Act passed last year requiring the Composite State Board of Medical Examiners to publish a Breast Cancer Booklet and to provide said booklet to the appropriate physicians in the state, and *urged* the physicians to distribute a copy of the booklet to every patient whose disease or course of treatment is covered by the material in the booklet. The original version of HB 615 adds the words "suspected disease" in order to urge the physicians to distribute the booklet to patients who have the suspected disease or the disease covered by the information in the booklet.

HB 615 passed the House but was amended in the Senate to mandate physicians distribute the booklet which therefore could make the physician liable for failure to distribute the booklet. Two other amendments were added by the Senate thus further complicating the issue from the original bill, therefore, causing HB 615 to *receive no joint action* by the House and Senate in the 1985 session.

HOUSE BILL 630 — TORT REFORM: DISMISSAL AND REFILE RULE
(Passed)

House Bill 630 which was part of the Governor's Advisory Council on Medical Malpractice package was amended and now *awaits the Governor's signature*. The original version of the bill would have reduced the number of dismissals from three to two and would have changed the law to restrict a dismissal of an action after the submission of the case to the jury. An amendment was added to put back the original three dismissals as was current law, leaving the rest of the bill intact. After the Governor signs this act, it will be unlawful for anyone to dismiss a case and refile it after the submission of the case to the jury.

HOUSE BILL 631 — CONSOLIDATION OF RELATED CAUSES OF ACTION
(Assigned to study committee)

This bill was another bill recommended by the Governor's Advisory Council on Medical Malpractice, requiring that all related causes of action be consolidated into one joint suit so that after an opportunity has been made public through various sources, a given incident may be tried only in one cause of action. HB 631 was placed in a *study committee* of the House Judiciary Committee. The action of the House Judiciary Committee was not to defeat the legislation, but after reading the 1984 Supreme Court ruling and opinion relative to this issue, the Judiciary Committee felt that this issue was appropriately addressed by the Supreme Court ruling and therefore a law to accomplish the same thing need not be considered at this time.

HOUSE BILL 683 — ABORTED HUMAN FETUSES
(Passed)

As *passed,* this bill requires that every hospital and clinic in which abortions are performed shall provide for the disposal of the aborted fetuses by cremation, interment, or other manner approved of by the commissioner of the Department of Human Resources. Failure to conform to this act is punishable by a fine of not less than $1,000 nor more than $5,000.

HOUSE BILL 811 — GEORGIA HOSPITAL COST CONTAINMENT LAW
(Assigned to study committee)

This proposal was introduced late in the session not for any action during the 1985 session but for discussion, deliberation, and redrafting prior to the 1986 session. A quick summary of this 24-page bill is the creation of a rate setting commission to establish all rates and charges for all hospitals and related institutions in Georgia. A *study committee* will be established for HB 811.

HOUSE BILL 904 — CLINICAL LABORATORY TECHNICIANS
(Did not pass)

This proposal, which *did not pass,* would have amended the Clinical Laboratory Act relative to the term "technician" to mean any person other than a clinical laboratory director, supervisor, technologist, or trainee who functions under the supervision of, but not necessarily in the physical presence of, a clinical laboratory director, supervisor or technologist and performs only those clinical laboratory procedures which require limited skill and responsibility and a minimal exercise of independent judgement.

HOUSE BILL 962 — CONFIDENTIAL COMMUNICATIONS: PHYSICIAN/PATIENT PRIVILEGE
(Assigned to study committee)

This bill, which did not pass, was an attempt to rewrite a current statute on physician/patient communication and confidentiality of records of the physician/patient and removal of the psychiatric privilege psychiatrists in Georgia currently have. This bill was referred to a *study committee* of the House Judiciary Committee.

HOUSE RESOLUTION 189 — TORT REFORM: STRUCTURED SETTLEMENTS OF AWARDS
(Passed)

This resolution, which did *pass* and is on the Governor's desk for his signature, was another of the issues recommended by the Governor's Advisory Council on Medical Malpractice. HR 189 recommends to all judges of this state and encourages the use of structured settlements and awards in appropriate cases so as to provide for the efficient and equitable resolution of tort lawsuits.

Senate Bills

SENATE BILL 5 — INSECT STING
(Pending before House Health & Ecology Committee)

This bill, which passed the Senate and is currently *pending before the House Health & Ecology Committee*, would permit natural resources personnel, school teachers, and others the right, after being adequately trained, to administer epinephrine to persons suffering a severe adverse reaction to an insect sting.

SENATE BILL 32 — CERTIFICATION OF RESPIRATORY CARE THERAPISTS
(Pending before House Health & Ecology Committee)

This bill passed the Senate and is currently *pending before the House Health & Ecology Committee*. As introduced, SB 32 would require certification of respiratory therapists under the Composite State Board of Medical Examiners. This proposed legislation specifically states that respiratory therapists would have to be under the direct supervision of persons licensed by the Board of Medical Examiners. SB 32 will probably have a hearing by the Health & Ecology Committee over the summer.

SENATE BILL 85 — EYE/CORNEAL TISSUE REMOVAL
(Did not pass)

This bill, which *did not pass*, would have only permitted the removal of corneal tissue upon the expressed written consent to remove such tissue by the next of kin of the deceased.

SENATE BILL 110 — STERILIZATION/MENTALLY INCOMPETENT PERSONS
(Passed)

Under current law, there was basically no way to appeal to the courts to authorize the sterilization of mentally incompetent persons. SB 110, which *passed* and is pending signature by the Governor, does establish a mechanism by which, upon appropriate court order, sterilization of a mentally incompetent person could be authorized.

SENATE BILL 128 — INFORMED CONSENT
(Assigned to sub-committee)

The Georgia Trial Lawyers Association introduced SB 128 which required that "prior to surgical or medical treatment the patient shall be informed of the treatment or course of treatment . . . the risks . . . and the alternatives to the surgical or medical treatment which may reasonably affect the person's decision whether or not to undergo the proposed surgical or medical treatment." The bill further required that the consent to surgical or medical treatment must be in writing and signed by the patient or the person(s) authorized to consent for the patient. The Senate Judiciary Committee assigned SB 128 to a sub-committee chaired by Senator Ed Hine from Rome. Senator Hine on behalf of the sub-committee rewrote SB 128 to in essence require written informed consent for only those patients who undergo surgical procedures under general anesthesia and added a new section to SB 128 which would have specifically permitted the physician to sue both the patient and the attorney when a frivolous suit was filed. The Georgia Trial Lawyers Association vehemently opposed the committee substitute; therefore, SB 128 was permanently *assigned to a sub-committee* within the Senate Judiciary Committee.

SENATE BILL 146 — BODY PARTS: SALE OF
(Pending before House Health & Ecology Committee)

This bill passed the Senate and is *pending before the House Health & Ecology Committee*. SB 146 would have made it "unlawful for any person, firm, or corporation to buy or sell, to offer to buy or sell, or assist another in buying or selling a human body or any part of the human body." This bill did not apply to "the purchase or sale of a cornea, pituitary gland, whole blood, blood plasma, blood products, blood derivatives or other self-replicating body fluids or hair.

SENATE BILL 151 — MOTORCYCLE HELMET REPEAL
(Not passed)

Again, the Motorcycle Riders Association introduced legislation to repeal the law which requires all motorcycle riders to wear motorcycle helmets. This bill was assigned to the Senate Public Safety Committee and was not passed by the committee.

SENATE BILL 160 — WORKERS COMPENSATION
(Passed)

SB 160 was the final bill *passed* on the last night of the 1985 legislative session. The version which passed was a House committee substitute to the Senate bill. The House committee substitute was written, sponsored, and pushed by Speaker of the House, Tom Murphy. This bill in essence rewrites Georgia's Workers Compensation law and specifies who can receive workers comp, what ages, how spouses are involved, the amounts of money that will be paid for injured employees, plus one section states that "the Board shall publish a list by geographical location reasonable charges for all medical services provided by workers comp. The Board may consult with medical specialists in preparing said list. Fees within this list shall be presumed reasonable." In addition, there is peer review language stating "the Board may require recommendations from a panel of appropriate peers in determining the fees submitted and the necessity of services rendered were reasonable."

MAG had reservations concerning the insertion and reference to fee scheduling language in this Act, and the House of Representatives deleted this section the last night of the session. Later on that night, the Senate put this section back, and the House agreed to the Senate version; thus, SB 160 passed and is on the Governor's desk.

SENATE BILL 165 — SCOLIOSIS
(Passed)

The passage of SB 165 specifically states that the rules and regulations promulgated by the State Board of Education shall not require the prior approval of parents or legal guardians of public school children for the screening of such school children for scoliosis.

SENATE BILL 170 — STATUTE OF LIMITATIONS
(Passed)

This is another of the bills which

began as a result of the Governor's Advisory Council on Medical Malpractice. The version which passed was not worded exactly as requested by the Governor's Council but was felt by many that the wording of SB 170 is better than the interpretation of the Supreme Court ruling of our existing statute of limitations relative to adults. SB 170 *as passed* states:

(a) "An action for medical malpractice shall be brought within two years after the date on which an injury or death arising from a negligent or wrongful act or omission occurred."

(b) "In no event may an action for medical malpractice be brought more than five years after the date on which the negligent or wrongful act or omission occurred."

Paragraph (a) of this law is intended to create a two-year statute of limitations, and paragraph (b) of this law is intended to create a five-year statute of ultimate repose and abrogation. This statute does not address the statute of limitations for minors and does not change the statute of limitations relative to foreign objects.

It became quite obvious during the deliberation process of SB 170 that if the medical profession was truly interested in changing the tort reform laws of this state, that persons other than doctors, hospitals, and malpractice insurance companies would have to get involved in the political arena in order to overcome the legal representation in the Georgia General Assembly. It is the opinion of the chairman of the Legislative Committee that it is up to each and every physician in the state to adequately educate the business people within their communities as to the importance of their involvement in this process in order to maintain and control the increasing cost of professional liability insurance in order that overall health care costs be maintained.

SENATE BILL 191 — LIVING WILLS
(Passed)

This law, which *passed,* changes the living will statute which passed in 1984, to specifically permit hospitals and other institutions to provide a copy of the living will to those persons who specifically request such living will documents.

SENATE BILL 200 — CORONER: HOSPICE/PATIENTS
(Passed)

SB 200 *passed* and states that those persons who are under a certified hospice program and who die in their homes would be exempt from the existing coroner statute. Currently, the release of the body to a funeral home could come about after the physician on the scene certifies the cause of death or an appropriate police investigation certifies the cause of death. This legislation was requested by physicians in the Savannah area and is now pending the signature of the Governor before becoming Georgia law.

SENATE RESOLUTION 165 — DRUG CLASS STUDY COMMITTEE

Passage of this resolution creates a Senate study committee for the purpose of ascertaining whether or not Georgia wants to create a third classification of prescription drugs. By a third classification, we mean, where only certain, current OTC drugs could be purchased through pharmacies in Georgia, therefore permitting them to adequately inform the patient as to the side effects of some of these dangerous OTCs.

* * *

Above are mentioned some of the major issues relative to medical care that were pending before the Georgia General Assembly in 1985. The total number of bills relative to health care were 135. If you have questions regarding any of the bills mentioned or any other health-related bill that went before the Georgia General Assembly, please call the Medical Association office, and a copy of the bill plus an explanation will be provided.

Once again, it has been an extreme pleasure for me to serve as your chairman of the MAG Legislative Committee. Although the number of medically related issues introduced in the Georgia General Assembly have substantially increased over the years, the involvement of physicians throughout the state has made my job as chairman that much easier. It is through the MAG Physician Involvement Program and the individual activity of physicians throughout this state which make MAG the voice of organized medicine in the state, and it is also the involvement throughout this state which gives MAG the successful tract record we have had on legislative items in the past and during the 1985 Georgia General Assembly. My only hope is that as you, the physicians of this state, continue your activity, we will continue to maintain this record of success in the 1986 Georgia General Assembly and in the years to come.

Maternal and Infant Health Committee

Luella M. Klein, M.D., Chairman

The Maternal and Infant Health (M & I) Committee has continued to function as a task force on Georgia infant mortality this year. It has worked toward the development of a consciousness raising resource document for physicians and others to help deal with problems related to infant mortality. It includes county specific statistical information regarding the problem, medical resources, education, and special projects that may be replicated in local areas. With the assistance of the MAG Public Relations Committee, this document has been distributed to all physicians in Georgia and other interested parties.

The incoming President of the MAG Auxiliary, Mrs. Dent W. Purcell, plans to make maternal and infant health a priority in the upcoming year. There is a wide variety of special projects to enable county societies and Auxilians to select one or more that will address local problems. The M & I Committee and MAG staff will be available to advise interested people on how to begin the development of these projects.

The MAG Executive Committee has asked the M & I Committee to work with the MAG Public Health and Public Relations Committees, and the Georgia Department of Human Recources in a public relations campaign to reduce smoking, teenage pregnancy, and infant mortality in Georgia. This is currently in the developmental stage.

The following 1983 (latest complete annual information) statistical information was provided by the Georgia Department of Human Resources, Vital Statistics Department:

Live Births:	90,068
Age 10-17	6,670
Age 18-19	9,703
Unwed Mothers	21,969
Age 10-17	4,483
Age 18-19	4,478
Low Birth Weight	
Less than 2500 GM	7,516
Spontaneous Abortions or Stillbirths	6,887
Individual Terminations of Pregnancy	31,337
Infant Deaths	
Less than a Year	1,233
Maternal Deaths	12

Medical Aspects of Sports Committee

Letha Y. Hunter, M.D.

The Sports Medicine Committee held its annual meeting July 13, 1984. Those in attendance included myself, Stephen Hunter, Robert Brand, David Watson, Joe Massey and Gould Hagler. Discussed at that meeting were two resolutions referred from the House of Delegates. One was on athletic injuries and the other on safety and horseback riding. We also made various proposals about boxing safety, trying to correlate the State Boxing Commission rules and compare them to proposed rules by the AMA. A newsletter to be sent to high school coaches and trainers was formulated and that newsletter was sent out as a service to the coaches in the State of Georgia in late December, 1984, and early January, 1985. We hope to make this an annual endeavor from our Sports Medicine Committee.

We also discussed the possibility of having a yearly symposium on athletic injuries but felt there were already several groups in the state now putting on symposiums and we could best serve the interest of those involved in the care of the athlete by supporting the ongoing symposiums rather than trying to conduct our own.

Our next annual meeting is scheduled for the middle of May, 1985.

Medical School Committee

William C. Waters, III, M.D., Chairman

Our Committee was established last spring to maintain liaison with the state's medical schools and to plan occasional conferences for practitioners and medical academics on topics of medical education.

Along the way, we were asked to review the proposal of the Liaison Committee on Medical Education on how it plans to accredit educational programs leading to the M.D. degree. We reviewed the LCME's proposed new standards and expressed our opinions in a letter to the Secretary of the LCME:

—The standards draft was good but necessarily general,

—We are concerned that the process of subspecialization starts so early in medical training,

—We believe that emphasis should be placed on *cost-effective* medical care as well as *high-quality* medical care.

Proposed MAG/Medical Schools Conference: With the help of Dr. Joe Bailey, Chairman of the MAG Council on Education, our Committee has discussed the possibility of holding a small invitational conference for Committee members and representatives of the medical schools in our state.

Here are our plans:

—To hold a Friday afternoon-Saturday morning meeting at the Athens Continuing Education Center,

—Agenda to include 1) medical manpower supply, how the schools are responding to it, and how they are selecting new students; 2) how the medical schools are educating students on the problems of professional liability; 3) how medical schools are advising seniors on the openings or saturation in the various specialties; 4) how medical schools are addressing the increasing demand for *cost-effective*, as well as high-quality medical care; and 5) Georgians in the "off-shore" medical schools — their numbers, and prospects for licensure.

—To invite three or four representatives from each school: 1) the dean or his designee, 2) a full-time faculty member, 3) a practitioner on the clinical faculty, and 4) either a basic sciences faculty member or an administrative official involved in selection criteria for students or curriculum development,

—To hold the conference this fall, preferably a weekend in October,

—To arrange one national and one local speaker on the issues of medical manpower and physician distribution.

We have budgeted $1000 to cover speakers' costs and expenses of the meeting facility.

Our plans are underway. We expect to have a successful meeting.

As Chairman, I wish to express my thanks to the members of this Committee for their support: Ralph E. Berggren, M.D., Macon; Lois T. Ellison, M.D., Augusta; Frank T. Ferrier, M.D., Atlanta; Harold L. McPheeters, M.D., Atlanta; James S. Maughon, M.D., Atlanta; George Shannon, M.D., Columbus; H. Kenneth Walker, M.D., Atlanta; Ms. Susan Middleton (Emory student), Decatur; and Mr. Leon Dent (Morehouse student), Atlanta.

Medicine and Human Values Committee

Richard B. Stewart, M.D., Chairman

At the time of this report, the Committee is considering a number of issues, e.g.,

1. Distinction between and advisability for or against adoption of policy(ies) relating to Do Not Resuscitate Guidelines; initiation/termination of treatment to terminally ill patients; initiation/termination of treatment to the severely handicapped patients (infant/Baby Doe or elderly/Granny Doe) who are unable to participate in the decisions regarding their medical care.
2. Revision or reaffirmation of MAG's current policy regarding definitions of death.
3. Investigate Nursing Home Without Walls concept in New York and similar-sounding Independent Living Projects in Atlanta and Macon — should MAG encourage development as an alternative to nursing home placement or remain neutral?
4. Indigent Care.
5. Ethical problems, e.g., Oregon Health Council developed recommendations in five categories: the

autonomy and dignity of individuals; prevention of disease; justice in distribution of health care services; cost control in health care; and fairness in resources allocation and rationing policies.

As recommendations are developed, they will be submitted to the MAG Executive Committee, Board of Directors, or House of Delegates for approval.

Membership Committee

William D. Logan, Jr., M.D. Chairman

This year, the Membership Committee has gone through several changes. First, Dr. John T. Yauger stepped down from his position on the Committee due to illness. The Committee was expanded to include representation from the ten District Medical Societies and 14 major specialty societies, as well as a resident representative and an auxiliary representative. Also, Bo Shurling was named as the staff person for the committee. The new group met once last year.

At the meeting, members were updated as to the present status of MAG membership. The Committee recognized the importance of increasing and maintaining MAG membership or eventually being faced with losing our credibility as being the representative voice of physicians in Georgia.

During the past year, the MAG Board of Directors adopted the following two goals concerning MAG membership: (1) to make every physician in the state aware of the benefits of organized medicine; (2) to enlist every physician who is suitable for membership. The Membership Committee discussed ways to meet these goals.

The Committee talked over some ideas for recruiting practicing and resident physicians for membership and methods of more accurately maintaining a nonmember physician list. Some of the tools for recruitment which were discussed were a general brochure describing the different aspects of MAG and a statewide peer-to-peer campaign in addition to simplifying various membership applications and review proceedings.

Artificial barriers of membership were also discussed by the Committee. The major barriers that were discussed were the length of the application and the time it takes to process the application as part of the burdensome and lengthy procedures that accompany applying for membership.

The Membership Committee recommended that MAG staff set up a meeting with county society executives and establish a simplified application and streamline the application review process and where possible, lessen the burden of procedure.

Membership Insurance Committee

Kenneth L. Goldman, M.D., Chairman

The 1984 House of Delegates combined the Committees of Risk Management, Professional Liability, and Membership Insurance. The Membership Insurance Committee is continuing the Risk Management Seminars. Since last June, some 400 Georgia physicians have attended the four seminars held this year.

With the leadership of J. Rhodes Haverty, MD, plans for specialty-specific Risk Management Seminars are well under way. Specialty societies have been contacted, and indications are that a number of societies are interested in developing these programs. Hopefully, MAG will be in a position to begin these seminars under a co-sponsorship arrangement in the fall or early next year.

The Membership Insurance Committee reviewed and supported a number of changes which were incorporated into the tort reform legislation introduced through the Legislation Committee at the 1985 legislative session. Legislation which passed this year included restrictions on dismissing and refiling a case after submission to the jury, encouragement of structured settlements in appropriate cases, and changes to statutes of limitations.

During the next year, the Membership Insurance Committee plans to continue efforts in the areas of risk management and tort reform. Further, the Committee will thoroughly assess endorsements for insurance programs offered to the membership of MAG to insure the quality and competitiveness of these plans.

Nutrition Committee

Judson G. Black, M.D., Chairman

The MAG Nutrition Committee met once in 1984. At that meeting, the Committee decided to research the possibility of ridding Georgia schools and other public places of junk foods.

The Committee also decided to look into the possibility of assisting in legislative matters dealing with food labeling. This decision was based on a request from the Committee on Health Education. The Committee proceeded to act on this decision by reviewing materials from the USDA and FDA.

The Committee then discussed plans to write scientific articles for MAG's *Journal* showing opposing viewpoints on matters of nutrition. They suggested having speakers with opposing viewpoints on a certain topic debate at Nutrition Committee meetings and the articles would be written based on that debate.

Finally, Judson G. Black, M.D., has stepped down as the Nutrition Committee's chairman and has asked to be replaced.

Occupational Health Committee

Robert P. Cunningham, M.D., Chairman

The Occupational Health Committee did not meet this past year. However, members of the Committee were involved with various facets of worker's compensation and occupational health in Georgia.

The Occupational Health Committee made recommendations to Governor Joe Frank Harris for appointees to serve on the Medical Board of the Worker's Compensation Board. This Board was established by Georgia law "to hear and determine controversial medical questions in claims for compensation arising in cases of death or disability from occupational disease." (Code Section 34-9-310(a)). Tom S. Howell, Jr., M.D., was appointed as Chairman of this Board.

Members of the Occupational Health Committee also met with the Governor's Study Committee on Worker's Compensation to review the Study Committee's progress and to make certain recommendations for cost containment methods, such as alternatives to a fee schedule.

The Occupational Health Committee will continue to review legislation dealing with worker's compensation.

Physician Lawyer Liaison Committee

James A. Kaufmann, M.D., Chairman

The Physician-Lawyer Liaison Committee worked with the State Bar of Georgia during the year 1984-85 on a revision to the "Principles Governing Physician-Attorney Relations." Negotiations have been slow, but we are near a satisfactory conclusion.

On May 30, 1984, the MAG Board of Directors approved a proposed revision agreed upon by representatives of MAG and the State Bar. Because of differences of opinion between the defense bar and the plaintiffs bar (principally over the release of medical records), the attorneys were not able to reach a decision as quickly as MAG. However, in February of 1985, the Bar's Executive Committee approved the proposed revision, and the Board of Governors is expected to give final approval in the near future.

Prison Health Care Committee

Robert H. DeJarnette, Jr., M.D., Chairman

The Committee on Prison Health Care met four times during the fiscal year 1984-85. Dr. Robert DeJarnette, Jr., of Vidalia, continues to serve as Chairman of this Committee.

Funding for the activities for the Jail Health Care Program, which is directed by this Committee, was obtained from the Georgia Department of Offender Rehabilitation in the amount of $40,408 for the state's fiscal year, which began on July 1, 1984, and will end June 30, 1985. For the state's fiscal year 1985-86, the Department of Offender Rehabilitation has included a 12% increase of this amount in their budget request, which is currently in committee. There was no increase in last year's budget; this increase includes that for both years.

MAG staff person assigned to this committee is Dorothy Parker, who also conducts the Jail Health Care Program with secretarial assistance provided at MAG at 25% time and paid for by this budget.

The Accreditation Program remains very active with several new prisons entering into the program for accreditation and several renewing accreditation. The county jails also continue to enter into the program and this past September, there were 50 new sheriffs taking office. At the first of this year, several are indicating interest in getting jails accredited. The Georgia Sheriffs' Association has sent out letters to all of its new sheriffs informing them of the MAG program, and the response to this has been quite good.

Prison facilities which were either accredited for the first time or reaccredited this past year are: Georgia Industrial Institute at Alto; Central C.I. in Macon; Dodge C.I. in Chester; Augusta Correctional and Medical Institute in Grovetown; and the Georgia Women's Correctional Institute at Hardwick.

County jails processed for accreditation and reaccreditation during the past year are: Chatham County Jail in Savannah; Walton County Jail in

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Monroe; Forsyth County Jail in Cumming; Hall County Jail in Gainesville; Richmond County Jail in Augusta; Douglas County Jail in Douglasville; Gordon County Jail in Calhoun; Newton County Jail in Covington; and Sumter County Jail in Americus. In addition to these successful accreditations, the Atlanta City Prison was site visited by members of the Committee. A report of recommendations was sent to the facility director. The Fulton County Jail in Atlanta is currently scheduled for an accreditation site visit.

The Technical Assistance Program also continues to grow. Assistance has been provided to ten more jails this year, and it is expected that within the next few months, five more new jails will be going through the accreditation program for the first time.

Physicians from the Committee continue to be quite active in conducting the site visits and in presentation of awards. Dr. Charles Allard of this committee made a presentation at the Georgia Sheriffs' Association last summer which was very well received.

One of the most significant developments of the year was the development of the Georgia Chapter of the American Correctional Health Association. Several physicians from the Committee were very instrumental in the development of this organization. They are: Drs. Hank Robinson, Arturo Riego, and Cassandra Newkirk. Although the Association was just started in May of 1984, the membership has grown very rapidly to 115 members. About half the membership are physicians who are working in correctional institutions and for county jails. Many of them maintain private practices as well as providing services to these institutions. The Chapter presented a symposium on correctional health care in December at the Buccaneer Inn at Jekyll Island, which was attended by 84 participants. Physicians from the committee who contributed by making presentations and organizing this symposium were Drs. Robinson, Riego, Newkirk, Bliven, and Gene Argo, R.Ph. Both CME and nursing credits were offered at this conference.

This Committee appreciates the valuable support given by other members of the Medical Association and respectfully submits this report as information on the progress and growth experienced during the past year.

Committee on Scientific Assembly

Ellis B. Keener, M.D., Chairman

Our 1984 Tenth Annual MAG Scientific Assembly was held, November 16-18, 1984, at the Ritz-Carlton Buckhead Hotel. We are delighted to report that, from everything we've heard, our meeting was a robust and jam-packed success.

1. *Attendance.* 745 physicians registered for our 11-specialty programs. This number is exceptionally strong — not only because it's larger than our registration last year (720) but also because we had fewer programs this year. (In 1983, we had 14 programs; Ophthalmology, Pediatrics, and Rheumatology did not meet with us this time.)

We attribute this superb attendance to two factors: the excellence of several programs (neurology and psychiatry broke all previous attendance records); and some extra promotional efforts. We tried to get two or three mailings to our members, with principal emphasis on specialty society membership lists. Also, for pathology, plastic surgery, and psychiatry, we mailed to physicians in the surrounding southeastern states.

Here are our registration figures:

Attendance by Specialty

Allergy/Immunology	30
Chest Disease	97
Emergency Medicine	32
Gastroenterology	31
Neurology	47
Neurosurgery	51
Otolaryngology	35
Pathology	105
Plastic Surgery	46
Psychiatry	148
Surgery	113
Specialty Unspecified	10
TOTAL	745

Speakers and topics for each of these sessions were arranged by a program chairman, chosen by the participating state specialty. For our success last fall, we owe a great deal of thanks to the following physicians who arranged programs for their specialties:

Thomas F. Smith, M.D.
Allergy and Immunology Society of Georgia

Paul J. Scheinberg, M.D.
R. Vaughn Maples, M.D.
Edwin A. Kramer, Atlanta
Georgia Thoracic Society
Georgia Chapter, American College of Chest Physicians

Gail V. Anderson, Jr., M.D.
Georgia Chapter, American College of Emergency Physicians

Paul R. Rodzewicz, M.D.
Georgia Gastroenterologic Society

Mark A. Kozinn, M.D.
Georgia Neurologic Society

Fleming L. Jolley, M.D.
Georgia Neurosurgical Society

William E. Silver, M.D.
Albert A. Clairmont, M.D.
Georgia Society Otolaryngology — Head and Neck Surgery
Greater Atlanta Otolaryngology/Head and Neck Surgery Society

A. Bleakley Chandler, M.D.
Georgia Association of Pathologists
Sara F. Nolting, M.D.
Atlanta Society of Pathologists

W. Jefferson Pendergrast, M.D.
Georgia Society of Plastic Surgeons

John B. Griffin, Jr., M.D.
Georgia Psychiatric Association

Talmadge A. Bowden, Jr., M.D.
William M. McKinnon, M.D.
Georgia Chapter, American College of Surgeons

2. *Site.* The Ritz-Carlton Buckhead Hotel had everyone raving. It's a post and luxurious place, and it's right across from Lenox and Phipps (we specifically mentioned this in our mailings to out-of-town physicians). Moreover, we got a great deal on guest room rates: $60 single and $70 double. Everyone loved the hotel, and has urged us to use it again next year.

3. *Finances.* $37,623.30 was spent on the 1984 meeting including these major headings:

Expenses	
Specialty Society Reimbursements (speakers' costs & honoraria)	$17,140.02
Ritz-Carlton Hotel	8,658.52
Publicity (printing, mailing, labels, postage)	7,738.55
Audiovisual Equipment	2,692.00
Administrative costs, other	1,394.21
	$37,623.30

Income

Registration fees	$29,961.56
Other	936.22
	$30,897.78

The cost to MAG of this meeting was therefore $6,752.52. We believe that this is a very reasonable allocation for a fine service to our members.

At the same time, we are aware that some within the Association would have our meeting financially self-sustaining. It has also been recommended that we consider establishing a differential registration fee, based on the length of a society's meeting. (They run from two hours to two full days). Our present registration fee schedule is thus:

MAG member	$50.00
Non-member physician	75.00
Health professionals	20.00
Residents/Students	no fee

This fee structure was established after our 1980 meeting. It may be time to consider revision. As of this writing, I plan to raise the issue with the Board of Directors on April 25 in Savannah.

4. *Plans for this November.* The MAG Executive Committee has approved November 22-24 as our meeting dates.

As in last year, we plan to hold our 1985 Scientific Assembly at the Ritz-Carlton Buckhead, where we've secured $80-single/$90-double guest room rates.

5. *Survey results.* Last year's House of Delegates directed us to conduct a survey of members' attitudes toward the MAG Scientific Assembly.

We decided to get an accurate, effective response by polling the doctors who attended last year's meeting. We tried to increase our response rate by mailing a short five-item questionnaire to all physicians who asked us to mail them a CME credit certificate.

We therefore mailed 402 questionnaires, and got back 217 of them completed — a resoundingly strong 54% response rate.

Here's what we asked, and what we were told:

Questionnaire Summary From the MAG Scientific Assembly

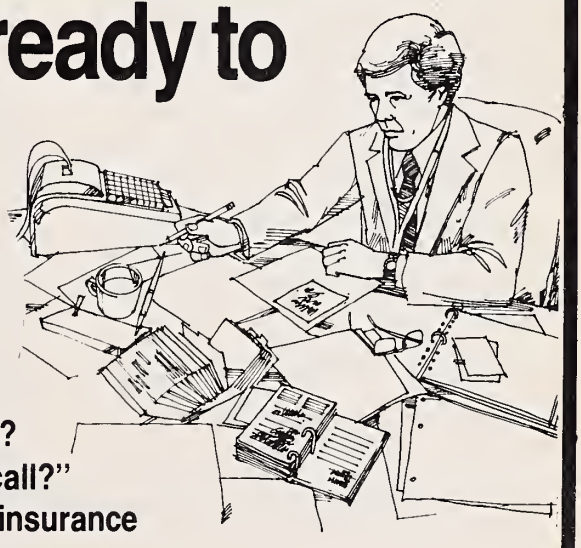
1. For me, the MAG Scientific Assembly is a very worthwhile educational meeting; one of the several I would want to attend each year. 198 agree, 16 disagree
2. I think the Medical Association of Georgia provides a very important service in bringing different specialty society meetings together during the Scientific Assembly. 198 agree, 15 disagree
3. The Medical Association of Georgia spends on the average, $10,000 to $12,000 per year (in addition to registration income) for the Scientific Assembly. This expenditure of members' dues money seems to be worthwhile. 190 agree, 15 disagree
4. The MAG Scientific Assembly should be continued as one of the Association's several annual meetings. 199 agree, 10 disagree

Out of the 217 questionnaires received by our office, an overwhelming majority has stated that they would like us to continue to conduct our annual scientific Assembly.

Of equal importance were the comments that were added. Many of these were supportive of our meeting; others were critical. A third group offered suggestions on improving our

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format, arrangments, etc. We've grouped them as follows:

Favorable comments from survey respondents:

—With the collapse of AGMA, there is now more pressing need than ever to conduct first rate comprehensive scientific regional programs.

—To some extent MAG service is a duplication of SMA, it is nevertheless quite valuable.

—The MAG Scientific Assembly is the major source of Category I CME credit for me, due to its locality, affordability, and quality of presentation. I hope that these assemblies will be continued in future years.

—I like the way we are doing things now; one scientific and one business session — very well done this year.

—I think it is most important for the MAG to support these scientific sessions. It is important for the state's MDs to get together on many levels.

—The quality of the last meeting was excellent; location and time were superb; I think it should be continued and a maximum effort should be made to get participation from more specialty societies.

(Selected) unfavorable comments:

—I enjoyed the meeting, but did not find some of the lectures to be worthwhile.

—Our specialty society meetings are much more informative. I attend MAG Scientific Assembly more because of duty than anything else.

—There is a tremendous number of meetings for the subspecialist with at least 4 in the fall that most of my Georgia colleagues find more useful.

—Please note I have discontinued my membership in MAG. (This questionnaire disagreed with all statements.)

—It's convenient but not unique; tries to appeal to too many yet not supported by enough members.

—I continue to feel my specialty meeting should be free standing and not associated with MAG.

—I only come because this is the annual seminar of my Society which would be given anyway whether MAG had its meeting.

—I saw little evidence of interplay between specialty physicians.

(Selected) comments from survey respondents offering suggestions as to our format or meeting arrangements:

—I believe combined sessions just as the Southern Medical Association does would be a help to us all in learning what is going on in other specialties.

—Provisions for breakfast and short lunch would relieve the anxiety of getting into town; provide more time to get acquainted with other area physicians.

—Would suggest that the assembly be held every other year; too many other meetings available as "competition" for CME.

—The registration fees should vary; like for one day meeting, half-day conference, etc.

—Not very much opportunity to meet with other specialties.

—I think more advertising or announcements before the meeting will increase attendance.

—It would be helpful if the drug companies and the medical-related industry participated and exhibit their products during the meeting time.

—Last meeting was "too dry" without luncheon or scientific demonstrations.

—MAG expenditures help societies to have a meeting they otherwise would not have without MAG support.

—Meetings should be held in May; in Savannah or Sea Island.

—I would like to see MAG sponsor a major luncheon address on socioeconomic issues like was done in the first several meetings.

We appreciate that so many of our attendees have let us know their thoughts. We are considering all of them, and making plans accordingly to ensure the continued success of the MAG Scientific Assembly.

Most of all, I wish to thank the physician members of the Scientific Assembly Committee. They are a tremendous source of support when we face difficult decisions: Edwin C. Evans, Atlanta; John A. Harrel, Jr., Decatur; Arthur J. Merrill, Jr., Atlanta; Carter Smith, Jr., Atlanta; and Roland S. Summers, Savannah.

Committee on Specialty Society Relations

Ellis B. Keener, M.D., Chairman

Pursuant to the action of the 1984 House of Delegates, the Interspecialty Council was terminated, and the Specialty Society Relations Committee was created in its place.

Whereas the Interspecialty Council had been given a very detailed charge, the Specialty Society Relations Committee has been given a more narrow, but less defined charge by the terms of the Report of the Committee on Committees which was adopted by the House last April. Specifically the new charge states:

"The Committee shall maintain communications between MAG and the Specialty Societies."

In an effort to get good communications with the Specialty Societies, our Committee met in September for the purpose of bringing to the Specialties: (1) the latest developments concerning implementation of the PRO contract by the Georgia Medical Care Foundation; and (2) an up-to-the-minute report on the Atlanta Blue Cross, Blue Shield PPO, "Voluntary Incentive Program (VIP)."

Attendance at that meeting was unusually high, which seemed to indicate that the Specialty Societies were looking instinctively toward MAG as a coalescing agent for the dissemination of state-level socioeconomic information applicable either to specific Specialty Societies or a combination of Specialties. Clearly no other forum exists for this purpose, and thus the Committee on Specialty Society Relations is filling an important, unmet need for that segment of the federation of organized medicine.

The Specialty Society Relations Committee continues to be the starting point for newly emerging state level specialty groups who wish to petition for membership on the Committee. The ultimate decision on questions of memberships are made by the Board of Directors following a recommendation by the Specialty Society Relations Committee. Membership on the Committee denotes official recognition of a Specialty by MAG.

During the past year, the Commit-

tee has been petitioned for membership by the Georgia Society of Gastrointestinal Endoscopy. The Specialty Society Relations Committee will meet on May 8, 1985, to evaluate this request and make a recommendation to the Board of Directors. The membership request of the GSGE will be evaluated pursuant to the Guidelines for Recognizing a State Specialty Society, that were adopted by the MAG Board in September 1983.

In the years ahead, Specialty Societies are going to become an increasingly important thread in the fabric of organized medicine. The need for unity among all practitioners has never been greater, and thus the need for MAG to increase its commitment to the unification, strength, and general welfare of all specialized groups under the protective patronage of the state medical association has never been greater. In short, we need each other now as never before.

In closing, I want to commend the members of the Specialty Society Relations Committee for the good beginning we have made during the past year and most importantly to recognize the Specialty Societies as equal partners with MAG as we all work to maintain high standards of medical care in the future.

Third Party Payors Committee

A. A. McNeill, Jr., M.D., Chairman

The Third Party Payors Committee met once and considered and acted on several matters pertaining to physicians' relations with insurance companies and other third party payors.

1. Interference in the Physician Patient Relationship

The Committee discussed the practice utilized by some insurance companies of notifying patients that physician charges are in excess of the carriers' UCR. The Committee noted that many of these letters imply that the physician charge is excessive or unreasonable rather than merely in excess of the amounts allowable for reimbursement under the policy. In fact, some carriers offer to provide legal assistance in cases where physicians attempt to collect from the patient charges in excess of the carrier's reimbursement and applicable coinsurance and deductibles.

The Committee reviewed the legal opinion requested by the MAG concerning this type of correspondence. The crux of legal advice is that for a physician to be fully protected in his efforts to bill the patient for unreimbursed charges, the physician must have first obtained a *written* agreement from the patient to pay all charges.

It is noted that in the absence of a written agreement, the physician might prevail by showing there was an implied agreement (in cases where the patient has a long established relationship with the physician), or that the fees were discussed or distributed to the patient through some mechanism as a booklet or handout describing the physician's normal charges.

Initially, a meeting was planned between MAG and the Health Insurance Association of America to discuss this problem. However, staff discussions with representatives of HCAA revealed that the Association's policy on such communications between insurance company and patient is in accord with MAG's position, i.e., that the patient should be told that limitations on reimbursement are due to the terms of the insurance policy and not that a doctor's fee is "unreasonable" simply it is above UCR.

Most of the complaints received by MAG from physicians did not reveal serious and widespread problems. However, some letters written by Metropolitan showed more cause for

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concern. These letters advise the patient not to pay the balance and to notify the company if the physician attempts to collect. Metropolitan offers to defend its determination of "usual, customary and reasonable" charges, and will represent the patient in any collection action by the physician.

The Committee's investigation discovered that these letters pertained to specific "hold-harmless" policies Metropolitan had negotiated with several large employers. The contracts hold the insured employee harmless, i.e., guarantee that he will not have to pay anything out of pocket except the deductible and co-payment. Hence, the tough stand against bills higher than UCR.

This discovery changed the nature of the problem somewhat. The terms of the hold-harmless are problematic, and the situation is more serious than we first expected and involves issues more fundamental than tactless letters written by insurance companies to patients.

The Committee has been advised that Metropolitan has revised the form letter and dropped the reference to the attorney. However, the hold-harmless policies are common for companies with unionized labor, and this factor is not likely to change.

2. Suggested Legislation on Review of Hospital Bills

The Committee recommended to the Executive Committee legislation be passed which would require the patient to sign hospital bills. The committee noted this would help alleviate errors and would make patients more aware of the care received during hospital stays.

This suggestion was approved by the Executive Committee. In the flood of legislative business, no action was taken in the '85 Session. The matter is on the Legislative Committee's list for 1986.

3. Resolutions Referred by the House of Delegates

(a) *Resolution 7 — Employer's Violation of Patient Confidentiality with Group Medical Insurance Claim Forms.*

The Committee discussed that the practice of employees having to return medical claim forms to their place of employment after medical treatment violates patient confidentiality. Accordingly, the Committee offers these possible solutions:

- Use of a two-part form. One with employer information and the other with physician information to be mailed to the insurance carrier by the physician or patient.
- Have employers record requested information on the form before the patient visits the physician.
- Require insurers mail check directly to the patient rather than the employer.

The Committee also recommended MAG seek passage of legislation which would preclude violation of patient confidentiality through group medical insurance plan administration if employers will not voluntarily comply.

The Executive Committee approved this recommendation. No action was taken in the 1985 Legislature. The matter is on the agenda for 1986.



Dr. Joseph Boyle, President of the AMA, addressed the House in an eloquent speech, highlights of which will appear in a future issue of the Journal.

(b) *Resolution 24 — Endorsement of Indemnity Plans.*

The committee recommended to the Executive Committee that MAG endorse the concept of indemnity insurance as being preferable to all other forms of insurance. The Medical Practice Committee also considered this matter. (See the Medical Practice Committee report.)

(c) *Resolution 33 — Physician Fees*

The committee recommended that MAG endorse the concept that the unit cost of a particular medical procedure is basically the same whether in the fee-for-service or prepaid environment. And, that differences in annual medical costs may vary because of over/under utilization which can be properly addressed by peer review in any reimbursement environment.

This position was approved by the Executive Committee.

Trustee Advisory Committee

Cyler D. Garner, M.D., Chairman

The Trustee Advisory Committee is pleased to report that a change in the Medical Association of Georgia Retirement Plan for MAG employees has been initiated. This change, to a money purchase plan, has the dual effect of benefiting our employees while limiting MAG's financial liability should investment earnings not meet expectations. Additionally, MAG will receive a return of prior year contributions estimated at $25,000 to $30,000 due to the timing of terminating the old defined benefit plan.

The new plan requires a contribution by MAG equal to 8% of salaries for those employees who have worked for MAG for at least one year. Employees will be given a choice of investment vehicles which will meet their particular financial requirements. At this time, we are assessing investment alternatives for these funds.

President

S. William Clark, Jr., M.D.

It has been an exciting and rewarding experience to have served as your President this year. I thank the House of Delegates for affording me this privilege.

The weekend of my installation coincided with the time of employment of a new Executive Director, the first change in this position in many years. Michael Fowler holds a Bachelor of Industrial Engineering Degree and a Masters Degree in Business Administration. Having had prior management experience, he was an excellent choice for this position. Mike Fowler and I have "grown-up together" in our jobs and also at times we seem to have "grown old together" in the past year. He is keenly intelligent, totally conscientious, and utterly tireless. In every instance, he has gone the extra mile, and we all owe him a debt of gratitude for a superb job.

When we began the year I enumerated in the first "President's Letter" several challenges facing us as I perceived them. All of these have been met, some successfully and some not so successfully. They were as follows:

1. *"Reorganize the office staff under a new Executive Director with the purpose of serving the membership as effectively as possible at the lowest possible cost."*

—The headquarters staff has been reorganized into a more efficient and effective team. Our budget request for salaries is less this year than last. The Executive Director should continue to have the support of the Executive Committee in these efforts.

2. *"Serve as good and responsible stewards of your membership dollars."*

—We have tried to be good stewards of the membership's dues dollars. In the period 1977-1984, during which there was not a dues increase, expenditures increased from $600,000 to over $2,000,000. During this time, budgets repeatedly were adopted by the House of Delegates which called for more expenditures than expected revenues. This policy finally caught up with us this year when, even with a $75 dues increase for 1984, in September we almost ran out of cash and came close to having to borrow money to meet payroll. This type of fiscal policy is unsound, to say the least. A resolution is before this House to prevent this from recurring. Overall budget requests are less this year than last.

3. *"Strengthen the House of Medicine by:*

A. Expanding ties with and services to more specialty societies."

—The MAG is now in good position to render more services to the specialty societies in our state. The Executive Committee of MAG and Board of Trustees of the Georgia Academy of Family Physicians have met jointly during the year to explore ways to effect closer communication and cooperation between the GAFP (the largest specialty society in Georgia) and the MAG. These meetings were fruitful and should be continued.

B. "Building a larger physical plant to house not only the MAG headquarters with its component specialty societies, but also MAG Mutual Insurance Company and Georgia Medical Care Foundation."

—Discussions have been held and preliminary renderings presented wherein the MAG Mutual Insurance Company would buy the headquarters building and enlarge it sufficiently to house the MAG headquarters with space provided for expanded services to specialty societies, MAG Mutual, Georgia Medical Care Foundation, and other endeavors, truly the whole House of Medicine. Hopefully, this will come to fruition soon after MAG Mutual has met certain requirements of the Georgia Insurance Commissioner regarding assets, reserves, etc.

4. *"Involve more young physicians in the organization."*

—The Resident Section has organized and elected its governing council and Delegate and Alternate Delegate to the MAG House of Delegates. A simplified application form has been recommended by the MAG Executive Committee for use by residents and students in applying for membership. The county society accepting the application will ultimately decide whether to use this form or not. Anything which serves as an "artificial barrier" to membership by our young colleagues should be removed. We need their participation. There are over 600 residents in Georgia who belong to the AMA (having become members by direct membership in the AMA) who do not belong to the MAG. The medical student section received the green light to proceed with development when constitutional barriers to application of all medical students were removed by the county societies.

5. *"Generate involvement of the membership in all levels of the MAG."*

—Unconcern and apathy have prevented much success in this field. However, if the House adopts a statewide alternative delivery system for health care in Georgia, I believe we will see an avalanche of members becoming involved in the MAG. This will come as a result of a twinge in the nerve which resides in the left hip pocket.

6. *"Broaden our ties with the Auxiliary and utilize them more."*

—This year has seen further strengthening of the ties between the MAG and its Auxiliary. The Auxiliary President has been invited to all meetings of the Executive Committee. One of the most successful public relations projects the MAG has ever done was carried out this year . . . the campaign for prevention of child abuse called, "It's Okay To Tell." This project was developed by Ms. Sherry Waronker of the MAG Public Relations Department and recognition for its excellence extended beyond our state's borders. We received national acclaim recently when it was announced that the "It's Okay To Tell" campaign had won the Silver Anvil Award. This award, given yearly by the Public Relations Society of America, is the highest honor given for a public relations program. The success of this first-of-its-kind project between a government agency, DHR, and the private medical sector, the MAG, was due mainly to the direc-

tion of the MAG Auxiliary with work done by the local county society Auxiliaries. Already, further health-related projects between DHR and MAG are being planned.

7. *"Improve the liaison between the MAG and other groups involved with health care."*

—Probably the most important and widely attended meeting of this type was the December meeting of the MAG Legislative Committee where representatives of 18 different groups attended. All were interested in health care in some fashion, and all discussed their aims and wishes, particularly in the legislative arena. The Executive Committee of MAG and The Board of Trustees of the Georgia Hospital Association have also met jointly on two occasions to discuss matters of mutual concern.

One of the greatest challenges to us as individual physicians and as an organization of physicians continues to be that of the cost of medical care. The copy of a speech by E. H. Lamkin, Jr., MD, which was given at our Leadership Conference (and which was enclosed along with the Delegates Handbook), should be read by all. (Ed. Note: It was also published in the May issue of the *Journal*.)

Changes in the method of delivery of health care (and payment therefor) have come on the scene with startling rapidity in Georgia. The merged Blue Cross/Blue Shield of Georgia is seriously considering forming, in the immediate future, a statewide HMO. Kaiser has announced plans to move into Georgia this year.

These changes are coming whether we like them or not. We, as a medical association, have the opportunity to direct this change and assure our patients access to quality medical care at lower costs, and provided by physicians who continue, as before, in the private practice of medicine.

At the special called session of the House of Delegates in October, 1984, the MAG leadership was instructed to develop a business plan for a proposed Physicians Organization in Georgia and bring it to this House of Delegates before implementation. You, as Delegates, have the unique opportunity to consider this matter and to decide whether physicians in Georgia, through the MAG, will take charge of their own destinies.

MAG is potentially a very powerful organization in Georgia. Its views, concerns, advice, and counsel are sought by other groups which have anything to do with health care in our state and nation.

Its strength resides ultimately in the physicians comprising the membership. Informed and involved members are vital to our very survival. The Time Is Now!

First Vice President

John D. Watson, Jr., M.D.

As we rapidly approach the end of this administrative year, we reflect upon the significance of the events that have transpired. The MAG has undergone staff revision with a new Executive Director and realignment of functions. Significant change is almost always fraught with fear and trepidation and is not without anguish. However, from my perspective, we have seen a remarkably smooth transition, and we are in a far stronger position in our administrative area than I have ever known for sound business operation.

The changes mandated by the federal government in hospital and physician reimbursement, coincident with the shift from traditional insurance to industry self-insurance and the alphabet soup — PPO, HMO, IPA, PHO — places organized medicine under great stress.

This stress emanates from the personal stress imposed upon each of us. Our membership is looking for answers, for guidance, and release from the frustration of this attack upon us. An attack by government, by business, by hospitals, by private entrepreneurs. Your leadership has wrestled diligently with these demands and the constraints we are under by the FTC and others. We have attempted to educate you in this new "Medical Business" and offer you a system to guide your own destiny. These programs will be presented to you through your House of Delegates at the annual meeting.

Casting aside all of the alphabet soup, if we cannot bargain from strength and cohesiveness, we will surely be divided, and many of us will become employees of entrepreneurs. I have admired your elected leaders in their dedication to tackle these issues, the toughest we have ever faced. We have only begun to present to you the magnitude and scope of our problems and concerns as we view them. More important is the inspired and non-defeatist approach to these "heavy" issues they have exhibited.

In many ways, not only is the individual physician on-the-line but also organized medicine is on-the-line. Will we address the issues, make the changes, create the vehicles that will allow us to maintain our professionalism and preserve our high quality of medical care? Or shall we continue under the guise of personal independence in all matters and be subject to the whims of the market forces?

We need each other and the Medical Association of Georgia, and the American Medical Association more now than ever. We must, in my judgement, grant our Officers and Board the power and authority to do the things expeditiously that are needed to protect our Learned Profession, even if it means some loss of personal initiative. We have long labored under the fear of legal attack, government attack, and complacency. We are now at the time of decision for not only is our future in peril but also that of those physicians who will come after us.

We will need your personal support, your financial support, and your professional support to weather this adjustment. To say, "It will no longer be business as usual," is a truism that many of us would like to reject.

Do we dare to fail in our efforts to preserve medicine as we know it should be?

It has been a pleasure to work in your leadership and I must give special commendation to our President, Bill Clark. It has been a signal year and one that we in medicine shall not easily forget.

Chairman of the Board of Directors

Joe L. Nettles, M.D.

The Board has met four times in the last year, maintaining our well-deserved reputation for sound deliberations.

I am particularly pleased of our role in maintaining fiscal responsibility in our Association. I believe it is a dis-

turbing contradiction that the Medical Association of Georgia several years ago passed a resolution urging a national balanced budget, when MAG has been operating without a balanced budget for many years. During the past 7 years, the Medical Association of Georgia has witnessed a dramatic decrease in its cash reserves from almost $2,000,000 to a time recently when there was hardly enough money to meet the monthly payroll. This was not due to mismanagement, but was the result of several factors: 1) our House resolution that no dues increase could be made until the cash balance had been almost exhausted; 2) recently broadened activities of MAG, which resulted in more expenses; 3) a normal inflation, which has affected all associations operating on income from fixed dues.

This predicament was studied at last year's House of Delegates meeting, and a small dues increase was passed to support a "bare-bones" budget. Now working to our advantage are the astute management of our new Executive Director, constant accurate monitoring by our Treasurer, and the vigilant purse-string guarding by the Board of Directors. For the first time in at least 5 years, we are living within a balanced budget, and operating on a pay-as-you-go basis. Several unforeseen emergency expenditures, including a special House of Delegates meeting last October, make this all the more remarkable.

Your Board of Director is attempting to rebuild a financial cushion of reserves so that we will be ready to handle the problems we expect to face in the near future. Our Vice-Chairman, Bill Collins, has an expression, "Fat Cats don't hunt." MAG is no longer a Fat Cat. We're trimmed down to a lean, hungry size, and we're anxious to take the offensive.

The Board is currently composed of 32 members and 21 alternates. These directors represent our eight district societies, our eleven larger county societies, as well as our Association officers. I believe this varied representation is important not only because it assures the Board of a healthy exchange of opinion on the weighty issues facing MAG, but also because it's important as a measure of the representative democracy which we maintain within our organization. We will continue to exercise our responsibilities diligently, reflecting the wishes and opinions of our membership.



Jack F. Menendez, M.D., Macon, Speaker of the House.



(Left): MAG's new President, William D. Logan, Jr., a thoracic surgeon from Atlanta, gives Immediate Past President S. William Clark, Jr., a bound set of Journals *that contain the President's Letters published during Dr. Clark's presidency.*



The Second Session of the House of Delegates opened on Saturday, April 27. Among the delegates shown here are Ellis Keener, Joseph Bailey, Bill Dowda, and Duane Blair.

Second Session — House of Delegates

Saturday, April 27, 1985

The Second Session of the MAG House of Delegates was called to order at 9:00 AM, Saturday, April 28, 1985, in Regency Ballrooms A & B, Hyatt Regency, Savannah, Georgia, by Speaker Jack F. Menendez, M.D.

S. William Clark, Jr., President of MAG, introduced Harrison L. Rogers, Jr., M.D., AMA President-Elect, for an address to the House.

Following Dr. Rogers' Address, the Speaker called for a report from the Credentials Committee which was given by Milton I. Johnson, Jr., M.D., Macon. Dr. Johnson reported 185 delegates and 16 alternate delegates were present, representing 42 component county medical societies. As provided in Chapter III, Section 3 of the Bylaws, a quorum was present.

Election

Ballots for the contested seat for the President-Elect and Secretary were distributed by the Tellers. Candidates for President-Elect were John D. Watson, Jr., M.D., Columbus, and Virgle W. McEver, M.D., Warner Robins; candidates for Secretary were Ralph A. Tillman, M.D., Decatur, and Robert A. Farrell, M.D., Rome.

Reference Committee Reports

The Speaker called for reports from the Reference Committee Chairmen.

Announcement of Election Reports

The Speaker announced that the results of the 1985 elections are as follows:

President-Elect — John D. Watson, M.D., Columbus
Second Vice President — Charles R. Underwood, M.D., Marietta
Secretary — Ralph A. Tillman, M.D., Decatur
AMA Delegate — C. Emory Bohler, M.D., Brooklet
AMA Delegate — W. W. Moore, Jr., M.D., Atlanta
AMA Delegate — Charles D. Hollis, Jr., M.D., Albany
AMA Alternate Delegate — Joe C. Stubbs, M.D., Valdosta
AMA Alternate Delegate — S. William Clark, Jr., M.D., Waycross
AMA Alternate Delegate — L. Newton Turk, III, M.D., Altanta
AMA Alternate Delegate — C. Peter Lampros, M.D., Toccoa
AMA Alternate Delegate — Virgle W. McEver, M.D., Warner Robins
Judicial Council — Term ending in 1989 — John M. "Pepper" Martin, M.D.
Judicial Council — Term ending in 1990 — C. Emory Bohler, M.D.

Presentation of Awards

Speaker Menendez requested that Certificates of Appreciation be presented to two legislators who have been strong advocates of quality medical legislation, which were presented to: Senator Edward Hines and Representative Bubby Childers by Dr. Kaufmann.

New Business

By acclamation, the House extended its appreciation to Speaker Menendez and Vice Speaker Kaufmann for their expertise in presiding over the activities of the MAG House of Delegates and to the MAG staff for its efficiency in coordinating all the functions required for a successful meeting.

Adjournment

There being no further business before the House of Delegates, the Speaker adjourned the 1985 House of Delegates at 4:00 PM.

Report of Reference Committee A

Alexander H. S. Weaver, M.D., Chairman
Richard E. DuBois, M.D., Vice-Chairman

During its meeting of April 26, Reference Committee A gave careful consideration to its referred reports and resolutions. The following physicians were members of that Committee: Alexander H. S. Weaver, Chairman, Macon; Richard E. DuBois, Vice-Chairman, Atlanta; Dent W. Purcell, Garden City; Rudy M. Shirley, Dalton; Garland E. Kinard, Rossville; Donald H. Campbell, Marietta; Carl V. Hancock, Jr., Albany; Richard A. Stappenbeck, Riverdale; and Paul Dickson, Martinez.



Rudy M. Shirley, Dalton; Garland E. Kinard, Rossville; and Alexander H. S. Weaver, Macon, Chairman of Reference Committee A.

Constitution & Bylaws Committee

Article V, Section 1, Composition

J. Rhodes Haverty, M.D., Chairman

Your Committee on Constitution & Bylaws proposes the following amendment to Article V of the Constitution, pertaining to the House of Delegates.

SECTION 1. COMPOSITION. The House of Delegates is composed of delegates elected by the component county medical societies, the Resident Physician ~~House Officers~~ Section, the Medical Student Section ~~Georgia Medical Schools~~, Medical Staff section, all delegates' qualifications and terms of office shall be provided for in the Bylaws. The officers, the Past Presidents of the Association, the Editor of the *Journal,* delegates to the AMA, the Executive Director and Chairpersons of standing committees shall be ex-officio members of the House of Delegates without the right to vote.

This amendment to the Constitution does not effect any change of policy, but rather is a housekeeping change.

The House Officers Section is renamed the Resident Physician Section. This change brings MAG into conformity with most other state medical associations and with AMA.

The insertion of "Medical Student Section" in lieu of "Georgia Medical Schools" clarifies that the students, through their student organizations, elect their non-voting representatives to the House. The Medical Schools per se do not elect.

This amendment, if adopted, will lie on the table and receive final House action in 1986. Changes in the Bylaws will be proposed at that time to bring the Bylaws into conformity with the amended Constitution.

House Action

Adopted.



Dent W. Purcell, Garden City; and Donald H. Campbell, Marietta.

Constitution & Bylaws Committee

Chapter IV, Section 2

J. Rhodes Haverty, M.D., Chairman

Your Committee on Constitution & Bylaws proposes the adoption of the following amendment to Chapter IV, Section 2 of the Bylaws, relating to the House of Delegates:

New final paragraph to read as follows:

Notwithstanding any deadline established for the introduction of resolutions to the House of Delegates, the Medical Staff Section and the House Officers Section shall have the right to adopt resolutions at their meetings immediately preceding the House of Delegates and to have their resolutions introduced at the opening session of the House.

There is, by custom, a deadline for receipt of resolutions and recommendations set at 30 days prior to the opening session of the House. Late resolutions must be approved by the Annual Session Committee. However, the Hospital Medical Staff Section and the House Officers Section do not meet until the day of the opening session. This amendment ensures that the House will consider their resolu-



F. William Dowda, Atlanta.

tions without special action by the Annual Session Committee.

House Action

Adopted.

Constitution & Bylaws Committee

Chapter IX, Section 2C

J. Rhodes Haverty, M.D., Chairman

Your Committee on Constitution & Bylaws proposes the following amendment to Chapter IX, Section 2c of the Bylaws, relating to dues and assessments.

(c) An active member who fails to pay dues for one year may be reinstated without reapplication upon payment of the current ~~and past~~ year's dues, provided there is no objection by the respective county medical society. Any member failing to pay dues for more than one year shall be eligible for reinstatement upon payment of dues for the current year, subject to reapplication to and approval of the respective county medical society.

This amendment drops the present requirement that an active member, who has not paid dues for a year, pay two years' dues in order to be re-admitted. The change allows such a member to be re-admitted by paying only the current year's dues.

This recommendation was approved by the Reference committee in 1984, but omitted from the House agenda because of a clerical error.

House Action

Adopted.

Constitution & Bylaws Committee

Chapter X, Sections 6 & 8; Chapter XI, Sections 1 & 2; and Chapter XII, Sections 1 & 2

J. Rhodes Haverty, M.D., Chairman

Several changes in the Bylaws are necessitated by the adoption in 1984 of the Report of the Committee on Committees. Your Constitution & Bylaws Committee proposes the following:

CHAPTER X — COMMITTEES

SECTION 6. Committee on Constitution and Bylaws. The Committee on Constitution and Bylaws shall be responsible for the continuing study of the organization of the Medical Association of Georgia. It shall recommend to the House of Delegates, through the Council on Administration and the Board of Directors, any amendments or revisions which seem necessary or advisable. At least every five years the Committee on Constitution and Bylaws shall recommend revisions after a complete study of the organization of the Association and its Constitution and Bylaws. Proposed amendments shall be referred to the Committee on Constitution and Bylaws for recommendation before action thereon is taken by the House of Delegates.

SECTION 8. Committee on Scientific Assembly

(b) Composition. The Committee shall consist of a Chairperson, appointed annually by the Executive Committee, and by reason of their offices, the current Chairperson of the Committee on Specialty Society Relations ~~Inter-Specialty Board of Directors~~ and the ~~Committee on~~ Chairpersons of the other committees in the Council on Education.

CHAPTER XI — SPECIAL COMMITTEES

SECTION 1. Special Committees. Special committees as required for the conduct of the business of the Association shall be instituted, and members thereof appointed, by the Board of Directors of the Association, with or without the recommendation of the Executive Committee of the Board of Directors, by the Executive Committee of the Board of Directors, or by the House of Delegates of the Association. The House of Delegates may instruct the Board of Directors to institute and appoint members to particular special committees. The method of the appointment of special committees shall be specified in the resolution instituting the particular special committee. Unless other provisions of these Bylaws or of the Constitution of the Association require, all committee appointments shall be made on a ~~annual~~ biennial basis ~~until the meeting of the particular appointing authority coinciding with or following next Annual Session of the Association.~~ Service on a committee shall be limited to three consecutive two-year terms. Chairmen shall be appointed for one-year terms and shall be eligible to serve three consecutive terms. All special committees shall report to the House of Delegates annually for disposition at the Annual Session. The Board of Directors of the Association shall review all committee reports prior to the Annual Session and shall have authority to make such recommendations thereon as it wishes.

Reports of committees requiring action by the House of Delegates shall be submitted to the appropriate Council prior to the Annual Session to assist in the coordination of all committee activities in that Council. Recommendations requiring action prior

to the House of Delegates shall be submitted to the Executive Committee or the Board of Directors.

SECTION 2. SUNSET. Each special committee shall be established for a period of six years, after which time it will cease to exist unless re-established by action of the particular appoint authority. The appointing authorities shall conduct reviews of the committees, according to a regular schedule, in order to ascertain the need for their re-establishment.

INSERT A NEW CHAPTER XII

CHAPTER XII — COUNCILS AND THE PRESIDENT'S CABINET

Section 1. Organization and Responsibilities of Councils. All standing and special committees of the Association shall be grouped by the Executive Committee into eight functional areas, and each group shall be overseen by a Council. Each of the Councils shall be composed of the Chairmen of its several committees and shall be chaired by another association member appointed by the Executive Committee. Each Council shall coordinate and supervise the activities of the several committees under its jurisdiction. Each Council shall meet at least semi-annually, the first meeting being as soon as practical after the Annual Session for planning, and the second meeting prior to the following Annual Session for the purpose of receiving and acting upon committee recommendations.

SECTION 2. PRESIDENT'S CABINET. The eight Council Chairmen shall be designated as the President's Cabinet to meet quarterly, with the MAG President presiding, for the purposes of considering the current and future activities of the Association and assigning tasks and projects to the several Councils and committees.

PRESENT CHAPTERS XII THROUGH XVI WILL BE RENUMBERED AS XIII THROUGH XVII

House Action

Adopted the proposed amendments and amended and adopted Chapter XII, Section 2, President's Cabinet as follows: The eight Council Chairmen shall be designated as the President's Cabinet to meet semi-annually, with the MAG President presiding, for the purposes of considering the current and future activities of the Association and assigning tasks and projects to the several Councils and Committees.



Reference Committee A members included Carl V. Hancock, Jr., Albany; Paul Dickson, Martinez; and Richard A. Stappenbeck, Riverdale.

Constitution & Bylaws Committee

Chapter X, Sections 1 & 9

J. Rhodes Haverty, M.D., Chairman

Your Committee on Constitution & Bylaws proposes the following amendments to Chapter X of the Bylaws:

SECTION 1. STANDING COMMITTEES. The standing committees of the Association shall be as follows:

(A) Executive Committee of the Board of Directors
(B) Committee on Finance
(C) Judicial Council
(D) Committee on Auxiliary
(E) Committee on Constitution and Bylaws
(F) Committee on Annual Session
(G) Committee on Scientific Assembly
(H) Committee on Publications

SECTION 9.COMMITTEE ON PUBLICATIONS. The Executive Committee shall serve as the Committee on Publications. It shall oversee the publication of the Journal of the Medical Association of Georgia.

This amendment establishes the Publications Committee as a standing committee and gives it a charge. The Executive Committee continues to serve as the Publications Committee.

House Action

Adopted.

Impaired Physicians Consultant Committee

G. Douglas Talbott, M.D., Chairman

The Physicians Consultant Committee (PCC) historically was formed under the leadership of Dr. James Mashburn to implement intervention with impaired physicians in Georgia. When Dr. Ed Waits assumed MAG leadership of the Impaired Physicians Program, the PCC was incorporated into the Impaired Physicians Committee.

Recommendation

During the past 2 years, the two committees have been indispensable, and it is my recommendation that the PCC now be formally dissolved and integrated into the Impaired Physicians Committee under Dr. Waits. Factually, Dr. Waits' current committee report suffices for both committees.



Virgle McEver, Warner Robins, (standing) shares his views on MAG's public relations policy at the Reference Committee.



Karl Gallegos, Director of the Division of Data and Statistics for the Impaired Physicians Program.

House Action

Adopted.

Non-Physician Health Care Providers Committee

Richard W. Cohen, M.D., Chairman

In its organizational year, this Committee has met four times. At its first meeting, it adopted the following aims:

—Develop a philosophy whereby organized medicine can uniformly interact with all non-physician providers.

—Liaison: between MAG and each of the organized groups and to become resource for the Board of Directors in relation to each of these groups.

—Legislation: to monitor legislation affecting non-physician groups and, when appropriate, lobby MAG viewpoints regarding these groups and the legislation that relates to them.

—Review Policies: review current MAG policies and relationship to non-physician provider groups.

—Summaries: to develop a brief summary on each group providing the following information:

1. Number of non-physician providers within the group
2. Licensure
3. Status of hospital privileges
4. Education
5. Anticipated goals and aspirations
6. Degree of organization

Steps it has taken toward fulfilling these aims include:

—Philosophy: The Committee considered establishing a general guideline for physician/non-physician health care provider medical care relationships and decided it would be inadvisable to make a recommendation of this scope at this time. The Committee perceives two groups of non-physician health care providers — those that started outside the practice of medicine and those that started as an adjunct to the practice of medicine. It is continuing to develop a philosophy statement for use in its own deliberations relating to different types of providers.

—Liaison: Individual members of the Committee are serving as liaisons with different groups of non-physician providers.

—Legislation: The Committee has considered possible legislation relating to licensure of lab technicians, radiology technicians, respiratory therapists, and changing scope of practice of physical therapists, speech pathologists, and audiologists. Actions have been limited to the legislative process.

—Policy Review: The Committee has had the opportunity to review a mind-boggling number of MAG policies relating to a wide variety of non-physician health care providers. It is continuing this review as previous actions may relate to current issues.

—Summaries: The committee is in the process of compiling information as outlined above for all known non-physician health care providers. This information will be disseminated where and when appropriate, with the approval of the MAG Executive Committee, Board of Directors, or House of Delegates.

Joint Practice Committee

In last year's reorganization, the MAG Nursing Committee was terminated and its responsibilities were delegated to the Non-Physician Health Care Providers Committee. The MAG/GNA Joint Practice Committee, composed of equal numbers of physician representatives from MAG and nurse representatives from GNA, had functioned as a subcommittee of the Nursing Committee. Chairmanship and staff rotates annually from MAG to GNA. This past year it was chaired and staffed by GNA.

The Non-Physician Health Care Providers Committee is concerned about the adversarial role between nurses and physicians. Communication between the two groups on organization, institutional, and individual basis is vital to good patient care. The Non-Physician Health Care Providers Committee feels the Joint Practice Committee should be continued as a subcommittee of the Non-Physician Health Care Providers Committee.

Recommendation

That the MAG approve continuing the MAG/GNA Joint Practice Committee

as a subcommittee of the Non-Physician Health Care Providers Committee.

House Action

Adopted.

Special Committee of the House

Ad Hoc Committee on Osteopathic Membership

Richard E. DuBois, M.D., Chairman

The physician members of the Special Committee of the House on Osteopathic Membership in MAG are Richard E. DuBois, Chairman, LaMar S. McGinnis, Jr., Alexander H. S. Weaver, Robert H. Lipson, John B. Rabun, H. Gordon Davis, Jr., Neal F. Yeomans, and Chappell A. Collins, Jr.

There was no meeting of this Committee during the year. It seemed impractical to survey our membership and/or the Georgia Osteopathic Medical Association's (GOMA) membership, primarily from a cost standpoint. There was written correspondence in favor of osteopathic membership from the President of the Walker-Catoosa-Dade County Medical Society and from the Medical Association of Atlanta's President. One member of MAG corresponded in writing with the Committee to indicate strong opposition to osteopathic membership.

A lengthy conversation with Darrell Dean, D.O., was held. He is an active member of the Georgia Academy of Family Physicians. A lengthy discussion was held with S. Thomas Greenstone, D.O., who is the current President, and with Arthur Green, D.O., as well as Cathy Garris, Executive Director to GOMA. These persons have discussed at length, not only at a Board level but also in the grass roots of their Society (150 members), the possibility of membership with MAG, should it be offered. Several points have been discussed, and I would like to share them with you here:



Ralph A. Tillman, Decatur, expresses his views on action the MAG should take at the Reference Committee meeting. Dr. Tillman was elected Secretary of the MAG at this Annual Session, replacing John T. Yauger, of Atlanta, who resigned for health reasons.

1. Osteopathic physicians have a strong sense of identity, and this is reinforced by their teaching hospital in Tucker, which soon is likely to be closed for the construction of a newer, bigger facility and a strong commitment to training of interns and residents.
2. GOMA dues, at the present time, are $350.00 (after the fourth year of membership), and the American Osteopathic Association (AOA) are currently $250.00. Osteopaths, in general, are not particularly interested in additional dues structure from our medical societies (county and state).
3. Osteopathic malpractice insurance, for the most part, comes from Professional Mutual Insurance Company of Kansas City, which was originally D.O. owned and operated, but has since been sold. Some osteopathic physicians obtain their malpractice insurance from St. Paul, but cannot obtain it from MAG Mutual. It is felt that combined membership with MAG would probably mean an offering of MAG Mutual malpractice insurance to osteopaths at a reduced premium compared with their current premium (this is speculation).
4. Osteopaths outside of the Metropolitan Atlanta geographic area, in general, have an isolated feeling and would like to become members of the county medical association.
5. In general, the osteopathic physicians with whom I have talked feel that the economic and political pressures which are occurring are extremely threatening and important. They feel that the concept of merging would probably strengthen the relative bargaining position for all physicians in these two arenas (political and economic).
6. The GOMA Board has not taken a stand one way or the other in terms of a policy, goal, or desire.
7. It is perceived from these discussions that Georgia osteopaths, in general, feel that it would be nice for MAG to offer membership, at which time they would make their individual decisions whether or not they would apply for membership. A selected number of individual osteopaths desire membership in MAG (and the necessary respective county society), and some have solicited such membership.
8. The osteopathic identity is important and few, if any, osteopaths desire that this be blurred or merged in any way. This would include an individual practice basis as well as organizationally at the local, state, and national levels.
9. In conclusion, it is felt that the desires and, to a point, the needs of some individual osteopathic physicians to join local county medical societies (and, therefore,

MAG) is outweighed from an osteopathic point of view by the considerations listed above. For this reason, it is not the desire of GOMA to actively solicit dual membership. It is felt that dual membership is something whose time has not yet arrived. However, it is felt that the point will likely arise again in the future.

Recommendations

1. The MAG House of Delegates not approve any changes in its Bylaws to provide for osteopathic membership.
2. That a liaison structure between MAG and GOMA be established for communication in all matters (not restricted to dual membership) and that such liaison structure be recommended to county medical societies with their appropriate osteopathic component society.

House Action

Adopted Recommendation 1.

Adopted Recommendation 2 *as amended* to read:

That a liaison structure between MAG and GOMA (Georgia Osteopathic Medical Association) be established for communication in all matters (~~not restricted to dual membership~~), and that such liaison structure be recommended to county medical societies with their appropriate osteopathic component society, provided GOMA reciprocates with a liaison structure.

Resolution 1

Certification for Georgia's Public Schools and State Board of Cosmetology

Richard E. DuBois, M.D., Delegate
Medical Association of Atlanta

RESOLVED, that MAG appoint a committee to study the necessity, reasonableness, and possible rewording of the "Physicians Certificate."

House Action

Adopted.

Resolution 2

Establishment of Medical Liability Committee

Cobb County Medical Society

RESOLVED, that the doctors of Georgia, for the concern of their patients, recognize, proclaim and expose the liability crisis as a primary threat to medicine, and with a spirit of goodwill and cooperation with the people, the health care industry, the business community, and the state legislature, produce a plan to justly and predictably control the crisis to guarantee the uninterrupted delivery of the finest medical care possible to the citizens of Georgia, and be it further

RESOLVED, that, to accomplish this goal, the Medical Association of Georgia establish a Priority Committee with a mandate to consider only this single issue, and to work with a similar committee from MAG Mutual Insurance Company to achieve a permanent solution.

Reference Committee Recommendation

That the House of Delegates direct the Executive Committee to establish a priority committee with a mandate to consider only medical liability and to work with a similar committee from liability insurance companies to achieve a permanent solution. The Committee is further charged to work with existing MAG committees such as Legislation and Public Relations.

House Action

Adopted the recommendation with the following addition to the last sentence: *and to act at all deliberate speed.*

Resolution 3

Admission of Doctors of Osteopathy to MAG

Walker-Catoosa-Dade County Medical Society

RESOLVED, that Doctors of Osteopathy are hereby declared to be eligible to become members of the Medical Association of Georgia in accordance with the existing Bylaws which govern membership in said Association. Any Bylaws now in effect in conflict with the Resolution are hereby amended to this extent, but no further.

House Action

Did not adopt.

Resolution 5

Diversion of Legitimate Prescription Drugs

Medical Association of Atlanta

RESOLVED, that the Executive Committee of the Medical Association of Georgia appoint a committee to work with the State Board of Pharmacy, the Georgia Pharmaceutical Association, the Composite State Board of Medical Examiners, and representatives of the State Law Enforcement agency (GBI) to draft model legislation acceptable to all involved groups to solve this problem in Georgia.

House Action

Adopted *as amended:* RESOLVED, that the Executive Committee of the Medical Association of Georgia appoint a committee to work with the State Board of Pharmacy, the Georgia Pharmaceutical Association, the Composite State Board of Medical Examiners, and representatives of the State Law Enforcement Agency (GBI) to draft model legislation acceptable to all involved groups to solve ~~this problem in Georgia~~ the problem of diversion of legitimate prescription drugs and to insure protection of both the rights of physicians and patients.

Resolution 6

Osteopathic Physicians

Medical Association of Atlanta

RESOLVED, that MAG adopt Bylaws changes that allow Os-

teopathic Physicians membership in the Medical Association of Georgia and its component societies.

House Action

Did not adopt.

Resolution 16

Unified Membership — County, State, AMA

F. William Dowda, M.D., Delegate
Medical Association of Atlanta

RESOLVED, that the Medical Association of Georgia adopt unified membership as its status for membership, i.e., in order to belong to either county, state, or AMA, one must belong to all three.

House Action

Adopted as amended by substitution: RESOLVED, that the Medical Association of Georgia encourage its members to join the AMA.

Resolution 18

Admission of Doctors of Osteopathy to MAG

F. William Dowda, M.D., Delegate
Medical Association of Atlanta

RESOLVED, that the right of full membership with all its obligations and privileges be extended to the osteopaths duly licensed in our state and practicing therein.

House Action

Did not adopt.

Resolution 28

Professional Liability Crisis

Hugo S. Moreno, M.D., Delegate
Medical Association of Atlanta

RESOLVED, that the MAG organize a program across the state to involve physicians in educating patients and general population about the gravity of the present professional liability crisis and its profound impact on health care costs, and be it further

RESOLVED, that MAG develop some mechanism by which this public concern can be transmitted to the Georgia Legislators prior to its 1986 meeting, and be it further

RESOLVED, that the Public Relations Committee of the MAG increase its efforts to supply to the representatives of the media and third party payers all the facts concerning the malpractice crisis and its effect on health care costs, now and in the future, and be it further

RESOLVED, that the House of Delegates instruct the MAG delegates to the American Medical Association to fully support the implementation of the recommendations from the AMA Special Task Force on Professional Liability report recently published.

House Action

Same as that for Resolution 2 also considered by Reference Committee A.

At CPC Parkwood, Caring Comes First

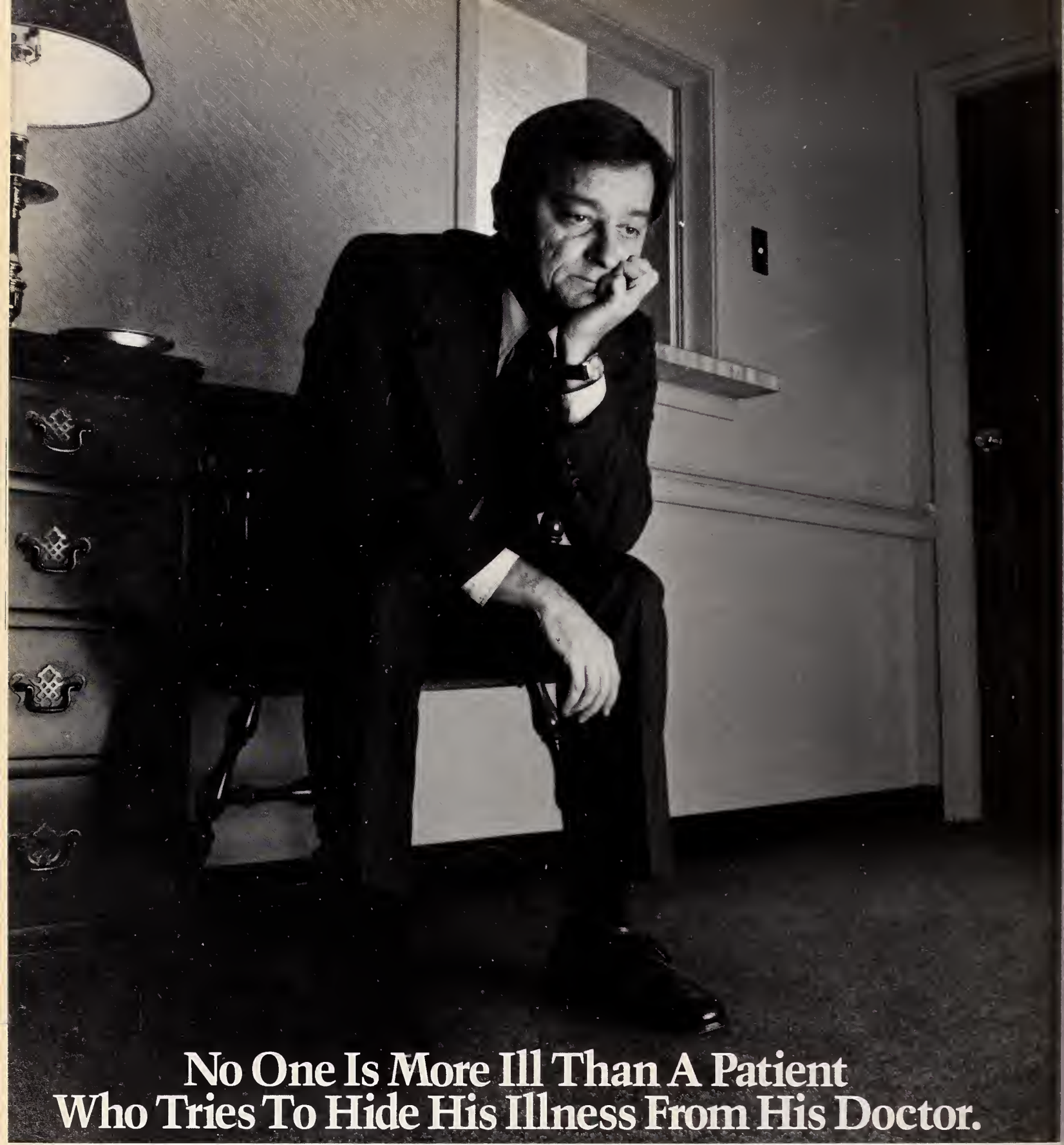


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Report of Reference Committee B

J. Moultrie Lee, M.D., Chairman
J. Q. Whitaker, M.D., Vice-Chairman

During its meeting of April 26, Reference Committee B gave careful consideration to its referred reports and resolutions. The following physicians were members of that Committee: J. Moultrie Lee, Chairman, Savannah; J. Q. Whitaker, Vice-Chairman, Warner Robins; Robert G. Bradbury, Savannah; Luther E. Brown, Macon; Gerald E. Sanders, Marietta; Joseph M. Almand, Jr., LaGrange; H. W. Smith, Swainsboro; Roy W. Vandiver, Decatur; and J. L. Askew, Riverdale.



William W. Moore, Jr., delegate from Atlanta and Past President of the MAG.



(Left) J. Moultrie Lee, Savannah, served as Chairman of Reference Committee B, and J. Q. Whitaker, Warner Robins, served as Vice-Chairman.

Emergency Medical Services Committee

Rodger Chapman, M.D., Chairman

During the past year the MAG Emergency Medical Services Committee has addressed the following issues:

1. Medicaid and Medicare reimbursement for ER treatment at a significantly lower rate for illness and injuries which are not deemed to be serious emergencies. The aim is to keep minor emergencies and routine care out of the ER, which is a very sensible goal. However, the policy presents two main problems:

   The determination of what is a serious emergency is made retrospectively, after the diagnosis is made. If a patient comes in with a complaint, he is seen by a physician, tested, diagnosed, and treated. The hospital and the physician must spend time and resources whether the patient is gravely ill or not. If the diagnosis falls within a "non-emergency" category, the reimbursement is nowhere near the actual cost of treatment.

   The system allows beneficiaries to seek ER care, whether appropriate or not, then denies adequate payment to the physician and the facility. The physician is placed in an impossible position: economic considerations indicate that the patient should be turned away, and medical ethics demand that he be seen and treated.

   The MAG Executive Committee brought this inequity to the attention of the Commissioner of the DMA.
2. The issue of quality assurance in Georgia's emergency medical services is of very deep concern to the Committee. There is a void in the ongoing quality control of ambulance services, in particular, the role of the medical advisor is frequently titular only with no real supervision of actual medical services provided.

In recognition of this problem, the Medical Association of Atlanta Emergency Medical Services Committee developed a statement relating to quality assurance. The MAA Board of Trustees approved the statement and asked that the MAG Emergency Medical Services committee consider it also. The MAG Emergency Medical Services committee did so and made the following recommendations which were approved by the MAG Executive Committee at its March 16, 1985, meeting:

That MAG:

A. Endorse the active participation of physicians in quality of care review of emergency medical services at all levels of administration including medical director, county, regional, and state levels.
B. Recommends that Georgia State regulations regarding the responsibilities of the medical director of an ambulance service be amended to include ongoing quality of care assessment and documentation of this assessment as a responsibility of the medical director. (Note: The DHR is currently revising its rules and regulations relating to Emergency Medical Services. One proposed change expands the responsibilities of the medical advisor.)
C. Recommends that a mechanism for effective assessment and supervision of medical control be implemented in each county (or EMS region, contingent upon local needs) and that this mechanism be under the supervision of a physician or a committee which includes physician members.
D. Recommends that a committee of physicians be established at the state level, from the DHR Emergency Medical Services

Advisory Council, to oversee the medical control of EMS in the State of Georgia. It is further recommended that this committee include a representative of the MAG.

E. Recommends that medical control at the local, regional, and state levels be given the official authority necessary for it to function effectively.

3. The committee reviewed MAG's current policies on Emergency Medical Care. They do not address quality assurance which adoption of the above recommendations would rectify.
4. Proposed Georgia legislation relating to the extent of civil liability of ambulance services, emergency medical technicians and medical advisors was considered. No legislation passed this year, but we understand that it will be carried over to 1986. Current law exempts "any person . . . who in good faith renders emergency care." Any proposed changes will be monitored by the Emergency Medical Services Committee and addressed through the legislative process.

Recommendations

Because of the importance of high quality emergency medical services in Georgia, the Committee recommends that the House of Delegates approve the following:

That the MAG:

1. Endorse the active participation of physicians in quality of care review of emergency medical services at levels of administration including medical director, county, regional, and state levels.
2. Recommend that Georgia state regulations regarding the responsibilities of the medical director of an ambulance service be amended to include ongoing quality of care assessment and documentation of this assessment as a responsibility of the medical director. (Note: The DHR is currently revising its rules and regulations relating to Emergency Medical Services. One proposed change expands the responsibilities of the medical advisor.)
3. Recommend that a mechanism for effective assessment and supervision of medical control be implemented in each county (or EMS region, contingent upon local needs) and that this mechanism be under the supervision of a physician or a committee which includes physician members.
4. Recommend that a committee of physicians be established at the state level, from the DHR Emergency Medical Services Advisory Council, to oversee the medical control of EMS in the State of Georgia. It is further recommended that this committee include a representative of the MAG.
5. Recommend that medical control at the local, regional, and state levels be given the official authority necessary for it to function effectively.

House Actions

- Adopted Recommendation 1 *as amended:* "Endorse the active participation of physicians in quality of care review of emergency medical services at all levels of administration ~~including medical director, county, regional, and state levels~~."
- Adopted Recommendation 2 *as amended:* "Recommend that ~~Georgia~~ state regulations regarding the responsibilities of the ~~medical~~ physician director of an ambulance service be amended to include ongoing quality of care assessment and documentation of this assessment as a responsibility of the ~~medical~~ physician."
- Adopted Recommendation 3.
- Adopted Recommendation 4.
- Adopted Recommendation 5 *as amended:* "Recommend that ~~medical control~~ physician supervision at the local, regional, and state levels be given the official authority necessary for it to function effectively.



(Left) H. W. Smith, Decatur; and Roy W. Vandi Decatur.

Medical Practice Committee

W. Dan Jordan, M.D.

The Committee reviewed the items as referred from the MAG Board of Directors and Executive Committee.

I. *Indemnity vs. UCR* (1984 House of Delegates Resolution 24 and Third Party Relations Committee)

In its deliberations, the Committee used the Georgia Insurance Commissioner's definition of "indemnity": "An indemnity plan pays a flat, stated rate for a medical service without consideration of charges." The Committee also considered: (1) MAG's previous endorsement of the UCR concept; (2) the purported increase in the cost of medical care and inequities in payment brought about by utilization of the UCR payment system; (3) the action taken by the AMA at its 1984 Interim meeting; (4) whether there is sufficient bias or preference to endorse either indemnity or UCR as a preferred payment mechanism; and (5) the 1984 House of Delegates action supporting increased awareness and involvement of the patient in the payment process.

After due consideration, the committee agreed to recommend that the MAG endorse any payment mechanism that meets the following criteria:

—Encourages the development of both patient and physician responsibility, trust, and mutual respect;



Jeffrey T. Nugent, Atlanta delegate.



(L to R) Joseph M. Almand, Jr., LaGrange; Luther E. Brown, Macon; and James L. Askew, Riverdale.

—Increases patient awareness in the reimbursement process;

—Offers freedom for the physicians to select their own patients, and set their own charges for their services, as well as the method of payment they deem acceptable;

—Offers freedom of patients to select providers and their means of paying for the services they receive; and

—Offers freedom of payers to determine what services will be covered, how much they will pay, and to whom they will make payment.

II. *Open/Closed Hospital Medical Staff:* The MAG Board of Directors requested the Medical Practice Committee to study the issue of Open vs. Closed Hospital Medical Staff; in particular, a 1984 House of Delegates Resolution that proposed "that the MAG recognize that hospital staff privileges are a right of properly qualified physicians and seek appropriate legislation to insure preservation of that right. . . ."

The committee asked MAG legal counsel if it appeared to be legally feasible to establish hospital staff privileges as a "right." His response states that . . . it *does* appear feasible for legislation to be enacted . . . since Georgia law requires that clinical privileges be granted in a non-discriminatory manner — on the basis of the applicant's demonstrated training, experience and competence, but,

—These laws have not been tested in court,

—Implementation could eliminate some of the other factors that hospitals have used to limit/deny privileges, e.g., past disruptive behavior or misconduct of the applicant, noncompliance with hospital rules, refusal to provide references, great geographical differences between the doctor's office or residence and the hospital, failure to provide evidence of malpractice insurance, etc.,

—Legislation would likely raise questions about existing exclusive contractual arrangements, i.e., setting contracts aside would be subject to challenge as an impairment of contract or property rights of the physicians involved, and

—We don't know if legislation could be drafted to "open" hospital medical staffs to physicians and not open those staffs to limited licensed practitioners.

Committee members felt that hospital staff privileges should not be legislated as an unqualified "right." It was the consensus of the committee that the current system allows sufficient flexibility and legal protection, i.e., it allows individual hospitals to determine to whom and for what hospital privileges should be granted. Hospital medical staff bylaws serve as contracts protecting physicians on staff. These bylaws and the JCAH Accreditation Manual assure that privileges are granted in a nondiscriminatory manner. Most courts, including those in Georgia, have already generally permitted hospitals broad latitude in determining whether to grant or withhold clinical privileges.

In response to this proposed Resolution, the Medical Practice Committee concluded that legislation on this topic would be counterproductive and recommends that MAG not pursue legislation to establish hospital staff privileges as a right.

III. *Select Committee on Aging:* The committee discussed the findings and background for conclusions of a report presented by the Chairman of the Select Committee on Aging, House of Representatives, Ninety-Eighth Congress (Second Session), entitled "World Health Systems, Lessons for the United States." The report focused on three aspects of health care which must be balanced in any health care system — quality, access and cost. The Medical Practice Committee concluded that while there may be improvements obtainable in balancing the aspects of quality, access and cost, the means expressed in this report are not necessarily an improvement over the present system and could, in fact, work to the detriment of the American public if implemented.

It is expected that the Select Committee on Aging report will be used as a basis for future legislation that would have an adverse impact on the private practice of medicine. In fact, the National Governors Association is already recommending some of these same ideas for national policy (in its July '84 Policy Statement).

The Medical Practice Committee drafted a critique/response to the Select Committee's report and forwarded it to the Executive Committee for their approval. The response was accepted and forwarded to the Georgia Congressional Delegation as MAG's response. It was anticipated that the members of the Georgia Delegation would utilize MAG's critique in their deliberations.

IV. *Increasing Patient Awareness in the Reimbursement Process:* The committee discussed several options that are in varying stages of development, such as flexible employee benefits plans which allow individuals to select the amount of insurance coverage they desire; plans to increase deductibles and coinsurance which makes the patient more aware of the costs of care; voucher systems which give patients incentive to shop for the most benefit for the least amount of money; assignment vs. non-assignment of benefit policies; methods to make both physicians and patients aware of hospital charges by review of itemized bills; and the likelihood of rationing medical care.

As a follow-up to its previous discussion about Health Bank IRAs (see August 18, 1984 meeting minutes), the committee voted to recommend that the MAG give a qualified endorsement to the concept as one way to increase patient involvement in the reimbursement process, understanding that the MAG does not have resources to examine all of its ramifications. Basically, the plan proposed by the National Center for Policy Analysis, Dallas, Texas, is a process that would give tax credits to workers for annual contributions to individual health care retirement accounts, with the long-range effect of markedly reducing Medicare expenditures.

There was further discussion concerning the probability that ongoing changes in the systems for providing medical care and the payment mechanisms for care — in particular, DRGs and PPOs — will bring about limitations of hospital privileges based on "cost containment" factors only. Recognizing that cost factors may be one factor in the determination process, the committee recommended that MAG emphasize that the primary requirement for medical staff privileges is the ability to provide high quality medical care.

V. *October 1984 Called Meeting MAG House of Delegates:* The committee discussed the Resolution adopted at the October 1984 called meeting of the MAG House of Delegates. A question was raised as to whether action taken at one meeting replaced previous House of Delegates action relating to the same issues, i.e., April 1984 House of Delegates action adopting the ideal mechanism for delivery of medical care and October 1984 meeting proposing a business plan which would not fit within the ideal mechanism.

VI. *Distributed for Information*
   A. Material relating to the February 1-2, 1984 MAG Leadership Conference
   B. An AMA publication entitled, "Physician Reimbursement Under DRGs: Problems & Prospects"
   C. The Executive Summary from the September '84 Phase One of the AMA Health Policy Agenda for the American People
   D. Two Georgia bills — SB 57 & HB 33 — relating to prescription of controlled substances. Committee members were asked to contact Mrs. Butler or Mr. Kidd regarding suggested changes in these bills.

Recommendations

1. That the MAG endorse any payment system that meets the following criteria:

   —Encourages the development of both patient and physician responsibility, trust, and mutual respect;
   —Increases patient awareness in the reimbursement process;

   —Offers freedom for the physicians to select their own patients, and set their own charges for their services, as well as the method of payment they deem acceptable;
   —Offers freedom of patients to select providers and their means of paying for the services they receive; and

   —Offers freedom of payers to determine what services will be covered, how much they will pay, and to whom they will make payment.
2. That MAG not pursue legislation to establish hospital medical staff privileges as a right.
3. That MAG give a qualified endorsement to the concept of Health Bank Individual Retirement Accounts.
4. That MAG emphasize that the primary requirement for hospital medical staff privileges is the ability to provide high quality medical care.

House Action

Recommendation 1: Adopted.
Recommendation 2: Adopted.
Recommendation 3: Did not adopt; see House Action for Resolution 24.
Recommendation 4: Did not adopt; see House Action for Resolution 26.

Public Relations Committee

Charles W. McDowell, Jr., M.D., Chairman

Your Public Relations (PR) Committee has been extremely active. Last year, the committee recommended to the House of Delegates that public relations continue as a top priority of the Association and that all MAG physician members and county medical societies continue to be encouraged that the patient's welfare must always be our number one con-



Members of Reference Committee B include (L to R): Gerald E. Sanders, Marietta; and Robert G. Bradbury, Savannah.



William M. Headley, delegate from Milledgeville.

cern. This was adopted, with emphasis on the fact that PR is most effectively practiced in the physician's office between the patient and the physician and the patient and the physician's office staff. Since the last House of Delegates, changes on the staff level have occurred at MAG.

In August 1984, Mr. Bo Shurling was added to the PR Department as an assistant director. Bo is a journalism graduate from Georgia State University. He came to the MAG from the Public Affairs office at the Georgia Department of Human Resources. Bo, in addition to helping in MAG's statewide efforts, assists the newly-formed membership committee and the county medical societies in recruitment and retention efforts. He is also editor of the MAG Newsletter. In addition to Bo's joining MAG, the PR Department was renamed the Division of Communications. In December 1984, Mr. Ken Williams, Director of the Communications Division, left MAG. Ms. Sherry Waronker is now Acting Director.

One of the objectives of the MAG is the betterment of public health. Your PR Committee has completed launching an extremely successful campaign for the prevention of child abuse in Georgia entitled, "It's OK To Tell." The project, done in conjunction with the Georgia Department of Human Resources, is aimed at increasing awareness and early reporting of child abuse. The campaign, following a kickoff on August 27 at the Academy of Medicine in Atlanta, received excellent publicity, including an interview with Governor Harris on Good Morning America.

Not only did "It's OK To Tell" represent physicians at their finest to the public, but it also served as a vehicle for the Auxiliary and physicians to work closely together in a program with excellent PR benefits. The Auxiliary is to be commended for the fine work they've done and continue to do in getting the child abuse puppet show, "Someone To Talk To" into elementary schools all over Georgia.

Other components of the "It's OK To Tell" campaign included TV commercials; radio spots; news and feature releases; information kits for auxiliaries, county medical societies and the press; a slide-tape show and book for physicians entitled, "The Physician's Role in Preventing and Reporting Child Abuse"; a kick-off reception in which Governor Harris spoke; a display for use in malls, etc.; articles featured in MAG's *Journal;* a TV documentary on the problem of child abuse; a media tour featuring Dr. Clark and Lt. Governor Miller.

Your PR Committee has also continued to promote the private practice of medicine and MAG. We have two slide shows available for use by county societies, one entitled "MAG, What's In It for You," which shows the benefits of MAG membership, and the other show, "You and the Changing Medical Marketplace" which explains alternative delivery systems of health care and how they are affecting your practice.

We also developed the "Selecting A Physician" brochure which has been distributed via Welcome Wagons, Chambers of Commerce, and other groups and agencies that welcome newcomers to local communities. Just recently a story on selecting a physician in the Columbus Ledger was based on this brochure.

We have continued to issue news releases when appropriate as well as letters to the editor.

For this year, the PR Committee has many activities planned. The next large scale community service campaigns we plan to do will focus on reducing Georgia's extremely high infant mortality rate and upgrading the health of Georgia's adolescents. Our PR efforts are to assist the Maternal and Infant Health Committee and the M & I Task Force in promoting early prenatal care. Part of our work will attempt to lower the number of teenage pregnancies in Georgia.

We are also working on a campaign to promote the elderly in Georgia. The AMA has already implemented a campaign entitled, "Don't Retire

From Life After 65." We want the MAG to follow suit. The campaign, a month-long endeavor to be implemented in May (Older American's Month), will stress independence of the elderly.

The committee is also looking at ways to help physicians market their practices. In the works are a series of informative brochures for physicians to place in their offices on topics ranging from safe use of prescription drugs to the benefits of exercise. We are also assembling a marketing handbook and marketing information for physicians.

This committee wishes to emphasize the importance of marketing the private physician and the change from tradition he/she must contend with in the changing medical marketplace.

We are happy that MAG has decided to make PR a top priority and are proud of the many activities of the committee and our staff, Ms. Sherry Waronker and Mr. Bo Shurling in MAG's Division of Communications.

Recommendations

1. That this 1985 MAG House of Delegates direct the PR Committee to promote the private practice of medicine as outlined here:

The private practice of medicine is defined as delivery of medical care carried out in a direct personal relationship in which direct responsibility for care and payment exists between the patient and physicians.

MAG supports the environment which allows for maximum freedom of choice for both the patient and physician to select the location of the delivery of care, alternatives of treatment and method of payment for services rendered.

Fiscal Note

That the House allow the PR Committee to expend funds to actively market private practice through an extensive TV, radio and print media campaign which presents the virtues of private practice. Such an endeavor would require potentially large sums of money, i.e., $500,000 to $1,000,000. Alternate forms of fund raising could be considered.

House Action

Recommendation 1: Adopted.

Fiscal note: Considered by Reference Committee F and not adopted.

Resolution 7

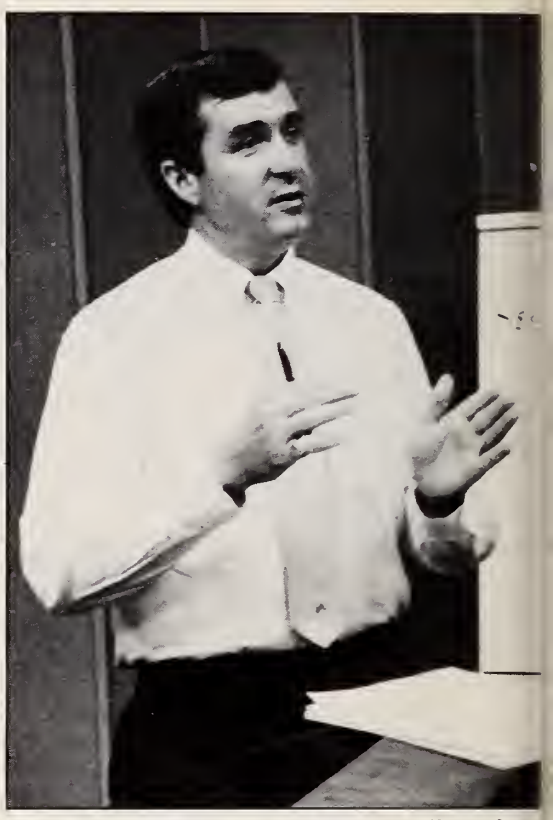
Commendation of Rusty Kidd

Cobb County Medical Society

RESOLVED, that the Board of Trustees of the Cobb County Medical Society recommends to the Executive Committee of the Medical Association of Georgia that all reasonable steps be taken to retain the services of Mr. Rusty Kidd.

House Action

Adopted the following substitute Resolve: "RESOLVED, that Rusty Kidd receive the highest commendation for his dedication and continuing, outstanding service as Director of MAG's legislative affairs."



Rusty Kidd, Director of Legislative Affairs for t MAG.

Resolution 12

MAG Public Relations

Jeffrey T. Nugent, M.D., Delegate
Medical Association of Atlanta

RESOLVED, that the MAG Executive Committee authorize the Public Relations Committee to employ a fund raising agency and public relations firm to organize a new major public relations campaign with the goal of achieving maximal possible public relations benefits with an initial budget of approximately $500,000, and be it further

RESOLVED, that all funding come from either the Public Relations Committee budget or solicited donors to include physicians, business, insurance industry, hospitals, and others, and be it further

RESOLVED, that only established policy of MAG be promoted through radio, television, print media.

FISCAL NOTE

$500,000 funding to come from MAG's budget and/or solicited donors to include physicians, business, the insurance industry, hospitals and others.

House Action

Adopted the first RESOLVE *as amended:* "RESOLVED, that the MAG ~~Executive Committee~~ authorize the Public Relations Committee to employ a fund raising agency and/or public relations firm to organize a new major public relations campaign with the goal of achieving maximal possible public relations benefits ~~with an initial budget of approximately $500,000~~."

Adopted the following substitute second RESOLVE: "RESOLVED, that funding for the public relations campaign come from solicitation of voluntary donations of $100 from each MAG member and other appropriate individuals or groups."

Adopted the third RESOLVE *as amended:* "RESOLVED, that only established policy of the MAG be promoted ~~through radio, television, print media~~."

Adopted a new fourth RESOLVE: "RESOLVED, that MAG coordinate its public relations efforts at both the county medical society and AMA levels."

The fiscal note (considered by Reference Committee F) was not adopted.

Resolution 20

Specialty Society Representation/Unified Membership

F. William Dowda, M.D., Delegate
Medical Association of Atlanta

RESOLVED, that one delegate be extended to those specialty societies whose members accept unified membership, i.e., belong to the county, state and AMA as well as their specialty society.

House Action

Did not adopt.

Resolution 22

Insurance Prior Approval Requirements

Ogeechee River Medical Society

RESOLVED, that the MAG and the AMA be prepared to serve as the patient's advocate when a delay in treatment caused by "prior approval" requirements of insurance companies results in harm to the patient.

House Action

Referred to the Board of Directors for appropriate committee study and report back to the 1986 House of Delegates.

Resolution 24

Endorsement of Health IRA

DeKalb Medical Society

RESOLVED, that the Medical Association of Georgia go on record as enthusiastically endorsing the Health IRA concept, and be it further

RESOLVED, that the MAG Delegates to the American Medical Association push for a similar endorsement through the AMA House of Delegates, and be it further

RESOLVED, that the Congressional delegation from Georgia be informed of MAG's endorsement of the Health IRA.

House Action

Adopted the first RESOLVE *as amended:* "RESOLVED, that the Medical Association of Georgia go on record as ~~enthusiastically-endorsing~~ giving qualified endorsement of the Health IRA concept."

Adopted the second and third RESOLVES.

ATTACHMENT I

Why Not Medical IRAs?

by Susan Lee

It's not big news that Medicare could run out of funds by the early 1990s. And government solutions are no revelation, either. They go from price-fixing-capping payments at the hospital bed or at the stethoscope — to making users pay more through higher deductibles or larger co-payments. The only tired old scheme that hasn't been trotted out yet is to raise payroll tax beyond the increases already scheduled.

There is talk, however, about one new and sensible solution: return a great portion of retirement medical insurance to the private sector. This majestic idea comes from a team gathered by the National Center for Policy Analysis, a Dallas-based think tank. Its benefits are many, its costs slight, and its chances not as bad as might be imagined.

Under the current system, Medicare is funded by a payroll tax equally divided between employer and employee. The tax now totals 2.6%, with workers paying 1.3% on income up to $37,800. Rates are scheduled to rise to 2.9% of payroll in 1986, with another bump up to 5.08% by 1995.

That's a considerable tax bite — revenues this year are estimated at $51.3 billion — and it's not nearly enough. The problem, along with overgenerous benefits and the waste and inefficiency engendered by the payments system, is that Medicare funding borders on check-kiting.

The tax revenues go into a trust fund, sure, but most of the money goes right back out again to pay the bills for current beneficiaries. This pay-as-you-go arrangement makes for a peculiar kind of trust fund: The money doesn't stay put long enough to earn investment returns. What's more, since individuals don't accumulate their own discrete piles, they can't pass anything to their heirs if they die before "their" contributions are used up.

The National Center for Policy Analysis goes right to the heart of that funding problem. The scheme, brainchild of economists John Goodman, Richard Rahn, George Musgrave and Peter Ferrara, calls for the establishment of individual retirement accounts to cover medical expenses. In short, medical IRAs. Each year workers could contribute up to $500 tax-free. Workers with no taxable income could receive a refundable tax credit. The money would constitute an actual trust fund, thus throwing off investment returns that would, in turn, accumulate tax-free. And, of course, those who die without exhausting their funds could assign the money to their heirs.

Under the NCPA plan, people would have two options upon retirement: use their funds to purchase insurance from a private company or withdraw the money to pay for medical expenses as they arise. How much would a typical worker have on retirement? The NCPA team calculates that a worker entering the labor force at age 20 would have just under half a million at age 65 and over $500,000 by age 67. That's assuming an initial contribution of $464.10, with contributions thereafter (see chart) [Editor's Note: Contact Joyce Butler at MAG Headquarters for a copy of the chart.] rising apace with wages at 5% a year (the postwar historical rate) and 9% investment returns. The initial contribution of $464.10 is what workers now pay to Medicare on average.

The NCPA plan does leave room for the government to play a role, however, a most important one. A payroll tax would be retained to do what it should do now and doesn't: provide coverage for catastrophic, or high-cost, illness. The government also would provide vouchers on retirement for workers electing to re-

main in the Medicare system. Even with this government role, the NCPA figures that Medicare expenditures would decrease and that the payroll tax could be lowered gradually.

There is, of course, a cost to this scheme. According to Peter Ferrara, if medical IRAs were used at twice the rate of regular IRAs, the tax revenue loss would be $12.5 billion in 1985. But that revenue drain, Ferrara says, would be gradually offset by lower Medicare bills as workers relied less on the Medicare system.

Now for the benefits. Privatization of retirement health insurance would create powerful inventives to hold down costs. Currently, a third party — the government — pays most of the bills. Thus, users have little reason to scrutinize, let alone constrain, their bills. Moreover, absent patients paying attention to costs, doctors and hospitals have no check on how many services they provide, or even on how necessary those services are. With both users and providers spending other people's money waste and inefficiency are practically guaranteed.

Now consider the two options people would have on retirement with the NCPA's medical IRA plan. Under the self-insurance option, the incentives to avoid unnecessary surgery and seek low-cost treatment are straightforward. The money comes out of one's own pocket. Says NCPA President John Goodman: "This is a wild guess, but if people had the option of taking the money or undergoing the operation, you would see the number of medical procedures cut in half."

Under the purchased insurance option, people would surely search for the insurance company offering the best deal. Since the best deals can be offered only by companies that are cost-effective, you can bet that insurance companies would be policing the providers of health care.

There are also more intangible benefits to the medical IRA idea. People would have control over their money. They could tailor their insurance coverage to fit their insurance needs. Substituting IRA funding for Medicare funding also would boost savings.

Sounds good, but does it sound likely? Well, the American Medical Association, for one, is interested. While it doesn't want to see Medicare phased out entirely — why sever the hand that feeds? — it looks at the NCPA idea as a "promising long-term alternative." At its December 1984 meeting, the AMA House of Delegates called for a continuing evaluation of the proposal.

Other powerful groups, such as the Conference Board, Business Roundtable and Health Insurance Association of America, have yet to be heard from. But Willis Goldbeck of the Washington Business Group on Health says, "We've supported medical IRAs privately and publicly, to no avail. Nonetheless, it's an idea that's going to grow."

And that brings us back to Washington. Goodman reports that the members of Congress he has talked with admit the proposal makes sense. But, he says, "the initiative will have to come from outside of Washington. When politicians see this idea mentioned in a publication like *Forbes,* they'll say, 'My God, it must be important.' Congress does not lead. It follows." [*Forbes,* February 11, 1985]

Resolution 25

Removal of Fee Freeze

Bibb County Medical Society

RESOLVED, the Medical Association of Georgia adopt a position of endorsing a lifting of the fee freeze by such physicians, and, be it further

RESOLVED, that the Public Relations Committee be instructed to disseminate the reason these physicians are having to raise fees.

House Action

Adopted as amended:

RESOLVED, that the MAG recognizes the expiration of the voluntary fee freeze, and

RESOLVED, that the Public Relations Committee be instructed to disseminate information regarding increases in physicians expenses, notably increasing rates of professional liability insurance, to the extent that a further extension of the voluntary fee freeze may work on an undue hardship on individual physicians.

Resolution 26

Economic Credentialing

W. Dan Jordan, M.D., Delegate Medical Association of Atlanta

RESOLVED, that the MAG reaffirm its support of the granting of hospital privileges based upon competency, qualifications, diligence, and performance in delivering quality care, and be it further

RESOLVED, that MAG state its opposition to any attempt to base hospital privileges on the economics of medical care.

House Action

Adopted both RESOLVES *as amended:*

RESOLVED, that the MAG affirm its support of the granting of hospital privileges based upon competency, qualifications, diligence, performance in delivering quality care, and the delivery of such care in accordance with bylaws and rules and regulations established by the medical staff, and

RESOLVED, that MAG state its opposition to any attempt to base hospital privileges solely on the economics of medical care.

Resolution 27

Conflict of Interest

W. Dan Jordan, M.D., Delegate Medical Association of Atlanta

RESOLVED, that MAG establish policy that no elected officer of MAG simultaneously hold an office in any third party entity concerned with the establishment or payment of physicians' fees.

House Action

Did not adopt.

Report of Reference Committee C

William H. Whaley, M.D., Chairman
Virendra M. Saxena, M.D., Vice-Chairman

During its meeting of April 26, Reference Committee C gave careful consideration to its referred reports and resolutions. The following physicians were members of that Committee: William H. Whaley, Chairman, Atlanta; Virendra M. Saxena, Vice-Chairman, Fort Gaines; J. P. Evans, Savannah; Minor C. Vernon, Macon; John D. Richmond, Dalton; William R. Hardcastle, Decatur; Dan B. Stephens, Marietta; Willard E. Quillian, III, Augusta; George M. Chastain, Albany; and William A. Wolff, Columbus.



Testimony tendered.



William H. Whaley, Atlanta, served as Chairman of Reference Committee C.



(L to R) Minor C. Vernon, Macon; William A. Wolff, Columbus; and John D. Richmond, Dalton, also served on Reference Committee C.

Ad Hoc Committee Regarding Physicians Office-Based Surgical Units

Clinton D. McCord, Jr., M.D., Chairman

The Need for Licensing Office-Based Surgical Units (Uni-specialty surgical units)

Recent operative procedures that in the past have been performed only in hospital settings are now being performed at physician's office surgical units. With newer instrumentation and surgical techniques, ophthalmology, plastic, urologic, orthopedic, ENT procedures are now performed in specialized office surgical settings with successful results and significant cost savings. The advantage of uni-specialty office surgical units are many.

A. *Cost Containment* — Facility fees for uni-specialty office surgical units are considerably cheaper. For example, the facility fee for cataract extraction would be $300.00 to $400.00 whereas hospitals now charge $1300.00 to $1400.00 for out-patient facility fees. With 700,000 cataract operations being performed per year in this country this would result in a savings of $700,000,000.00 per year to the consumer or insurance company on this single procedure alone.

B. *Peer Review* — At present office cataract surgery and other procedures are already being performed in out-patient office facilities without peer review at present. Licensing of these facilities would insure that all these office units are physically adequate and it would also enable some sort of peer review to be instituted to insure patient safety and appropriate surgery.

C. *Doctor Independence* — With the possible institution of the "flat fee" in the future which will be paid to hospitals for medical care including the surgeon, it is very likely that in the future doctors will be in the position of having to negotiate with hospitals for their part of the "flat fee." "Cost free" cataract surgery and other "cost free" surgery in the future will be mainly at the expense of the physician. Patients will shop for hospitals instead of physicians for their care.

It is felt that the consumers and insurance companies should be "given a break" on hospital expenses. This alternative method of health care with physician office surgical units can play a role in relieving the financial "emergency" we have in medical care in this country today.

It may not be appropriate or feasible for all surgical sub-specialists to undertake starting an out patient surgical suite in their own office, but there is a compelling need for licensing of this alternative form of health care delivery. Those surgeons who are willing to engage in this endeavor should have the right to obtain a license from the State so that they may be compensated with facility fees for their surgical units from insurance companies. At present it is impossible to license an office-based uni-specialty unit because of the draconian requirements to obtain a Certificate of Need (CON) for these units and the present linkage of licensing to a CON.

The Medical Association of Georgia Ad Hoc Committee met to determine the need and feasibility of licensing office uni-specialty surgical suites unlinked to CON requirements.

The MAG Ad Hoc Committee On Physicians' Out-Patient Surgical Units Meeting January 13, 1985

The Ad Hoc Committee did unanimously recommend licensure for physicians' uni-specialty surgical units which would be unlinked to CON requirements. It was felt that the Certificate of Need requirement is primarily a mechanism to control hospital or hospital-like facilities and would be inappropriate to apply to physicians' office surgical units.

It was also recommended that the details of physical specifications for the surgical unit and the mechanism of peer review would be the responsibility of the State societies of the surgical sub-specialty involved.

In addition to licensing meeting the above requirement it was also felt that accrediting by a National accrediting agency such as the AAAHC would also be appropriate for these units.



Among those listening to the discussion of the business of Reference Committee C are (L to R) Bill Collins, Milton Johnson, J. K. Shellack, Bruce Newsom, and Rhodes Haverty. Also pictured in the back are Leon Dent, Dan Willoughby, Charles Todd, Emory Bohler, and Bill Headley.

Consideration of Licensing of Uni-Specialty Office Surgical Units by the MAG Executive Committee — February 3, 1985

The report of the Ad Hoc Committee recommending introduction of legislation in the General Assembly for licensure of uni-specialty office surgical units unlinked to the CON was presented to the Executive Committee. The concept of the uni-specialty office based surgical units was endorsed however fears were expressed from certain members of the Executive Committee that if legislation involving licensure of a physicians' office were introduced into the General Assembly it could be amended to include licensing of all physicians' offices not just surgical units.

Alternative suggestions were made with the ability to obtain facility fees for these uni-specialty surgical units. One recommendation was to directly approach the insurance companies and negotiate with them for their willingness for facility fee reimbursement. This was deemed not feasible because of a contract that Medicare has with the State Health Planning Agency in which a facility must have a license to be reimbursed by Medicare for facility fees.

Dr. Ben Okel, Chairman of the Georgia Department of Human Resources indicated that there is a possibility that licensure could be granted without new legislation through the existing agencies.

Discussion with Members of the Georgia Department of Human Resources Regulatory and Licensure Section

Meetings and discussions were held with Mr. Scott Sprinkle who is head of the Office of Regulatory Services of the Department of Human Resources and Mr. Clyde Roy who is Director of Standards and Licensure Section of the Department of Human Resources. Mr. Sprinkle indicated that he and Mr. Roy would query the Attorney General of the State to determine if it is possible to grant licenses to certified uni-specialty office based surgical units without any legislative changes being necessary. Mr. Sprinkle did however express personal belief that since there are statutory exemptions of every private physician's office from licensure in this State that it would require a change in statute by legislative effort to amend this law to allow licensure of office surgical units. Mr. Sprinkle also stated that the existing restriction on licensure for office surgical units to enable them to compete in the ambulatory scene is in conflict with the current efforts for cost-containment in this State and Country and the Georgia Department



(Left) Virendra M. Saxena, Fort Gaines, served as Vice Chairman; seated next to him is J. P. Evans from Savannah.



Members of Reference Committee C include (L to R) Dan B. Stephens, Marietta; George M. Chastain, Albany; and William R. Hardcastle, Decatur.

of Human Resources considers this a serious problem and stands ready to cooperate with physicians in the Medical Association of Georgia in remedying this problem.

Recommendation

It is the Committee's recommendation that the Medical Association of Georgia should petition Mr. Scott Sprinkle and the Georgia Department of Human Resources to pursue licensure through the existing system without legislation if possible. Should it be the opinion of the Attorney General that this is not possible, then it is a recommendation of the committee that there should be a change in the statutory exemption of the private physicians' office from licensure in that it would allow licensure of the surgical units to obtain facility fees while preserving the exemption of other private physician's offices from unwanted licensure.

House Action

Did not adopt the Committee's recommendation but adopted the following substitute recommendation: "That MAG continue its goals of assurance of quality of patient care and cost containment while at the same time making all efforts to obtain appropriate reimbursement of individual physician office surgical services, without licensure, and that there be a report of the progress at each Board of Directors meeting and the 1986 House of Delegates."

Resolution 17

Physician Exemption from Jury Duty

F. William Dowda, M.D., Delegate
Medical Association of Atlanta

RESOLVED, that the Medical Association of Georgia seek amendment to the state statutes to permit automatic exemption of physicians from jury duty *upon* the physician's request.

House Action

Did not adopt:

Resolution 29

Composite State Board of Medical Examiners

Charles A. Lanford, M.D., Delegate
Bibb County Medical Society

RESOLVED, that the Medical Association of Georgia attempt, by those means available to it, to embark on the State Legislature to be sure that the Composite State Board of Medical Examiners receive all of the monies funded.

House Action

Adopted as amended: "RESOLVED, that the Medical Association of Georgia attempt, by those means available to it, to influence the state legislature to appropriate all needed monies to the Composite State Board of Medical Examiners."

Resolution 30

Support Funding of Graduate Medical Education

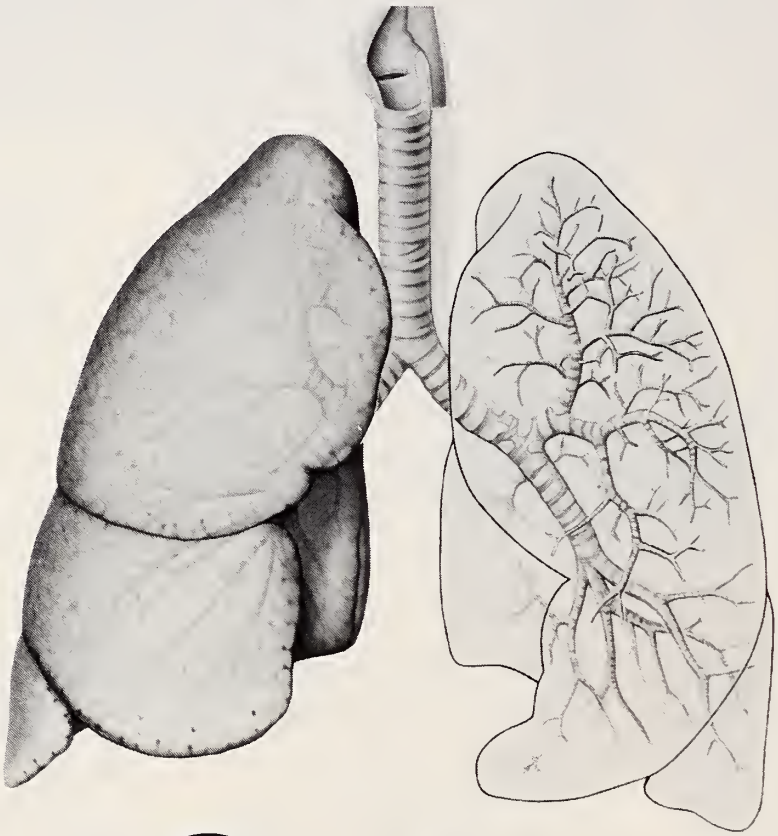
MAG Resident Physician Section

RESOLVED, that the Medical Association of Georgia urge Georgia Representatives and Senators in the U.S. Congress to oppose cuts in funding of graduate medical education in the absence of stable alternate funding sources.

House Action

Adopted as amended: "RESOLVED, that the Medical Association of Georgia urge Georgia Congressmen and Georgia's U.S. Senators to oppose cuts in funding of post graduate medical education in the absence of stable alternate funding sources."

Consider the causative organisms...



Ceclor®
cefaclor
250-mg Pulvules® t.i.d.

offers effectiveness against the major causes of bacterial bronchitis

H. influenzae*, *H. influenzae*, *S. pneumoniae*, *S. pyogenes
(ampicillin-susceptible) (ampicillin-resistant)

Brief Summary. Consult the package literature for prescribing information.

Indications and Usage: Ceclor* (cefaclor, Lilly) is indicated in the treatment of the following infections when caused by susceptible strains of the designated microorganisms.

Lower respiratory infections, including pneumonia caused by *Streptococcus pneumoniae (Diplococcus pneumoniae), Haemophilus influenzae*, and *S. pyogenes* (group A beta-hemolytic streptococci).

Appropriate culture and susceptibility studies should be performed to determine susceptibility of the causative organism to Ceclor.

Contraindication: Ceclor is contraindicated in patients with known allergy to the cephalosporin group of antibiotics.

Warnings: IN PENICILLIN-SENSITIVE PATIENTS, CEPHALOSPORIN ANTIBIOTICS SHOULD BE ADMINISTERED CAUTIOUSLY. THERE IS CLINICAL AND LABORATORY EVIDENCE OF PARTIAL CROSS-ALLERGENICITY OF THE PENICILLINS AND THE CEPHALOSPORINS, AND THERE ARE INSTANCES IN WHICH PATIENTS HAVE HAD REACTIONS, INCLUDING ANAPHYLAXIS, TO BOTH DRUG CLASSES.

Antibiotics, including Ceclor, should be administered cautiously to any patient who has demonstrated some form of allergy, particularly to drugs.

Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics (including macrolides, semisynthetic penicillins, and cephalosporins); therefore, it is important to consider its diagnosis in patients who develop diarrhea in association with the use of antibiotics. Such colitis may range in severity from mild to life-threatening.

Treatment with broad-spectrum antibiotics alters the normal flora of the colon and may permit overgrowth of clostridia. Studies indicate that a toxin produced by *Clostridium difficile* is one primary cause of antibiotic-associated colitis.

Mild cases of pseudomembranous colitis usually respond to drug discontinuance alone. In moderate to severe cases, management should include sigmoidoscopy, appropriate bacteriologic studies, and fluid, electrolyte, and protein supplementation. When the colitis does not improve after the drug has been discontinued, or when it is severe, oral vancomycin is the drug of choice for antibiotic-associated pseudomembranous colitis produced by *C. difficile*. Other causes of colitis should be ruled out.

Precautions: *General Precautions* — If an allergic reaction to Ceclor* (cefaclor, Lilly) occurs, the drug should be discontinued, and, if necessary, the patient should be treated with appropriate agents, e.g., pressor amines, antihistamines, or corticosteroids.

Prolonged use of Ceclor may result in the overgrowth of nonsusceptible organisms. Careful observation of the patient is essential. If superinfection occurs during therapy, appropriate measures should be taken.

Positive direct Coombs' tests have been reported during treatment with the cephalosporin antibiotics. In hematologic studies or in transfusion cross-matching procedures when antiglobulin tests are performed on the minor side or in Coombs' testing of newborns whose mothers have received cephalosporin antibiotics before parturition, it should be recognized that a positive Coombs' test may be due to the drug.

Ceclor should be administered with caution in the presence of markedly impaired renal function. Under such conditions, careful clinical observation and laboratory studies should be made because safe dosage may be lower than that usually recommended.

As a result of administration of Ceclor, a false-positive reaction for glucose in the urine may occur. This has been observed with Benedict's and Fehling's solutions and also with Clinitest* tablets but not with Tes-Tape* (Glucose Enzymatic Test Strip, USP, Lilly).

Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.

Usage in Pregnancy — Pregnancy Category B — Reproduction studies have been performed in mice and rats at doses up to 12 times the human dose and in ferrets given three times the maximum human dose and have revealed no evidence of impaired fertility or harm to the fetus due to Ceclor* (cefaclor, Lilly). There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed.

Nursing Mothers — Small amounts of Ceclor have been detected in mother's milk following administration of single 500-mg doses. Average levels were 0.18, 0.20, 0.21, and 0.16 mcg/ml at two, three, four, and five hours respectively. Trace amounts were detected at one hour. The effect on nursing infants is not known. Caution should be exercised when Ceclor is administered to a nursing woman.

Usage in Children — Safety and effectiveness of this product for use in infants less than one month of age have not been established.

Adverse Reactions: Adverse effects considered related to therapy with Ceclor are uncommon and are listed below.

Gastrointestinal symptoms occur in about 2.5 percent of patients and include diarrhea (1 in 70).

Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment. Nausea and vomiting have been reported rarely.

Hypersensitivity reactions have been reported in about 1.5 percent of patients and include morbiliform eruptions (1 in 100). Pruritus, urticaria, and positive Coombs' tests each occur in less than 1 in 200 patients. Cases of serum-sickness-like reactions (erythema multiforme or the above skin manifestations accompanied by arthritis/arthralgia and, frequently, fever) have been reported. These reactions are apparently due to hypersensitivity and have usually occurred during or following a second course of therapy with Ceclor. Such reactions have been reported more frequently in children than in adults. Signs and symptoms usually occur a few days after initiation of therapy and subside within a few days after cessation of therapy. No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome.

Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy.

Other effects considered related to therapy included eosinophilia (1 in 50 patients) and genital pruritus or vaginitis (less than 1 in 100 patients).

Causal Relationship Uncertain — Transitory abnormalities in clinical laboratory test results have been reported. Although they were of uncertain etiology, they are listed below to serve as alerting information for the physician.

Hepatic — Slight elevations in SGOT, SGPT, or alkaline phosphatase values (1 in 40).

Hematopoietic — Transient fluctuations in leukocyte count, predominantly lymphocytosis occurring in infants and young children (1 in 40).

Renal — Slight elevations in BUN or serum creatinine (less than 1 in 500) or abnormal urinalysis (less than 1 in 200).

[0617B2R]

Note: Ceclor* (cefaclor, Lilly) is contraindicated in patients with known allergy to the cephalosporins and should be given cautiously to penicillin-allergic patients.

Penicillin is the usual drug of choice in the treatment and prevention of streptococcal infections, including the prophylaxis of rheumatic fever. See prescribing information.

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Reference Committee D

E. M. Molnar, M.D., Chairman
LaMar S. McGinnis, Jr., M.D., Vice-Chairman



Serving on Reference Committee D were (Left): A. Bleakley Chandler, Augusta; and William E. Barfield, Sr., Augusta.



(L to R) LaMar S. McGinnis, Jr., Decatur, Vice-Chairman of Reference Committee D; E. M. Molnar, Columbus, Chairman; Clinton D. McCord, Jr., Atlanta.

During its meeting of April 26, Reference Committee D gave careful consideration to its referred reports and resolutions. The following physicians were members of that Committee: E. M. Molnar, Chairman, Columbus; LaMar S. McGinnis, Jr., Vice-Chairman, Decatur; Anthony M. Costrini, Savannah; William E. Barfield, Sr., Augusta; Philip Z. Israel, Marietta; Rodney M. Browne, Macon; John B. Hunt, Valdosta; Clinton C. McCord, Jr., Atlanta; A. Bleakley Chandler, Augusta; and Ronald A. Freeman, Macon.

Cancer Committee

J. Moultrie Lee, M.D.
Chairman

At the March 1984 meeting, the MAG Executive Committee requested the MAG Cancer Committee to assist the Composite State Board of Medical Examiners in their preparation of a booklet on breast cancer. H.B. No. 49 as passed by the House and Senate in 1984 directed the Composite State Board of Medical Examiners to develop and distribute an informational booklet on breast cancer and the treatment of breast cancer. Such a booklet has been drafted by the Composite State Board. This draft is to be reviewed by members of the Cancer Committee and input from this Committee forwarded to the Composite State Board. Credit for this cooperation between the State Board and the Cancer Committee will appear in the front of the booklet.

As MAG supports the Cancer Control Division of the Adult Health Unit of the Department of Human Resources, action was taken by members of this Committee to persuade or request various legislators to support the Department of Human Resources in its request for $800,000.00 to aid additional patients in the poverty level in order that a higher than 22% of these persons can be served. The results of this endeavor are unknown.

In August the Chairman met as a member of the Council on Community Services. The problems of the breast cancer booklet and of adequate funding for the Cancer Control Division were reported and discussed.

The Cancer Committee met on January 16, 1985. The Committee discussed its present charge as adopted at the 1984 House of Delegates.

Present Charge:

"The Committee is established to provide a coordinating relationship between the MAG, the Georgia Department of Human Resources, the Division of Cancer Control and the Georgia Division of the American Cancer Society by making policy recommendations to the Council on Community Service on matters relating to cancer and cancer control and overseeing any MAG activity on programs related to cancer."

The Cancer Committee voted to request that its charge be changed not only for clarification but also to facilitate the addition of organizations, such as the Governor's Advisory Cancer Committee that may need its support, or the deletion of organizations that no longer require its support.

The Cancer Committee discussed the State Cancer Program at length. This Program has been chronically and consistently underfunded to a large degree. The Committee feels MAG has had little, if any, impact on the funding of the State Aid Program.

The Chairman wishes to express his sincere appreciation to the members of his Committee and to the MAG staff for their continued interest, aid and support during the past year.

Recommendations

1. The Committee requests that its charge be revised as follows:
   The MAG Cancer Committee is established:
   1. To provide a coordinating relationship between MAG and other organizations dealing

with Cancer, such as, the Cancer Control Program of the Division of Public Health, Georgia Department of Human Resources;
2. To provide a coordinating relationship between MAG and the Georgia Division of the American Cancer Society;
3. To make recommendations to MAG on matters relating to cancer and cancer control;
4. To oversee any MAG activities or programs relating to cancer.

2. The Cancer Committee recommends that funding of the State Aid Cancer Program become a priority item for MAG, and that MAG take actions necessary to see that the program is adequately funded in the future.

House Action

Recommendation 1: Adopted.

Recommendation 2: Adopted *as amended:* "That the MAG elevate State funding of the State Aid Cancer Program to a top priority status on its legislative agenda, and that the MAG conduct an intense lobbying effort to secure adequate funding for this Program from the State Legislature."

Public Health Committee

O. Grey Rawls, M.D., Chairman

The Committee is implementing a MAG/DHR joint campaign aimed at reducing substance abuse, including emphasis on non-smoking. The campaign will be directed toward adolescents in Georgia schools. We are asking advisors from each of Georgia's medical schools to participate. Governor Harris has expressed interest and we hope he will help kick it off. The MAG Executive Committee has already approved this endeavor.

We have asked for funds to be included in the 1985-86 MAG budget to enable the committee to promote non-smoking in physicians' offices and encourage county societies to become involved in efforts to reduce smoking in local schools.

Recommendations

1. That MAG actively promote non-smoking in physicians' offices.
2. That MAG encourage county societies to initiate and support other efforts to reduce smoking and other substance abuse in local schools.

House Action

1. Adopted *as amended:* "That MAG actively encourage physicians to not allow smoking in their offices."

2. Adopted *as amended:* "That MAG encourage county societies to initiate and support ~~other~~ efforts to reduce smoking and other substance abuse in local schools."

Resolution 4

Medical Care of Victims of Rape

Medical Association of Atlanta

RESOLVED, that the MAG encourage the Emergency Medical Services Committee to work with the Metropolitan Atlanta Crime Commission, the Grady Rape Crisis Center and other rape crisis centers in other areas of Georgia in designing a model protocol for handling rape victims which can be distributed and disseminated to all medical facilities in the State of Georgia who provide emergency medical services.

House Action.

Adopted

Resolution 8

HTLV-III Testing

Medical Association of Atlanta

RESOLVED, that MAG adopt the following statement on HTLV-III testing:

1. HTLV-III antibody testing for screening purposes should be performed on all donated blood. Informed consent for this testing should be obtained from all donors. The customary efforts to maintain patient confidentiality should be continued.

House Action

Referred to the MAG Executive Committee.

Resolution 9

Needle Stick Proposal for HTLV-III

Medical Association of Atlanta

RESOLVED, that the MAG adopt the following needle stick proposal for HTLV-III testing:

1. Persons receiving a needle stick exposure to body secretions from patients with Acquired Immunodeficiency Syndrome, AIDS related complex, HTLV-III positive blood, or other conditions, such as homosexuality, hemophilia A, multiple blood transfusions, etc., may be at risk for acquiring HTLV-III infection.
2. All such needle sticks should be reported to the CDC and the employee/patient who has been stuck by the needle should be enrolled in the needle stick follow-up protocol maintained by the Center for Disease Control, Atlanta, Georgia.
3. It is understood that many persons who have been so injured will be interested in confirming whether or not the person's blood that has been inoculated into them is, in fact, positive for HTLV-III. Limitations of the HTLV-III antibody test are understood. It is further recognized that some of the patients from whom the blood was obtained would be willing to have their blood tested on behalf of the employee who has been stuck.

House Action

Referred to the MAG Executive Committee.

Resolution 10

Informed Consent — HTLV-III/HBSAG Testing of Patient's Blood Involved with Medical/Laboratory Accident

Medical Association of Atlanta

RESOLVED, that the MAG adopt the following Informed Consent form.

House Action

Referred to the MAG Executive Committee.

Resolution 11

Informed Consent — HTLV-III Testing In Physicians' Offices

Medical Association of Atlanta

RESOLVED, that MAG adopt the following Informed Consent form.

House Action

Referred to the MAG Executive Committee.

Resolution 14

Auxiliary Child Abuse Program

DeKalb Medical Society

RESOLVED, that the House of Delegates urge every county auxiliary to implement the program at the earliest possible date.

House Action

Adopted *as amended:* "That the House of Delegates urge every county auxiliary to implement and continue to promote the ~~at the earliest possible date~~ MAG "It's OK To Tell" program.

Resolution 21

Circulation of *AM News* to National Media

Ogeechee River Medical Society

RESOLVED, that the *American Medical News* be routinely sent to editors of major newspapers in the country so that they will have a more balanced view of medical care.

House Action

Adopted the first RESOLVE.

Adopted the following second RESOLVE: "That MAG's Division of Communications routinely send AMA News Releases to editors of newspapers in the state so that they will have a more balanced view of medical care concerns."

Resolution 23

Clinical Training in STD (Sexually Transmitted Diseases) for Medical Students/Physicians in Training

Richard E. DuBois, M.D., Delegate
Medical Association of Atlanta

RESOLVED, that MAG endorse the concept of medical school/STD affiliation to provide supervised clinical experience in STD for all medical students or physicians in training.

House Action

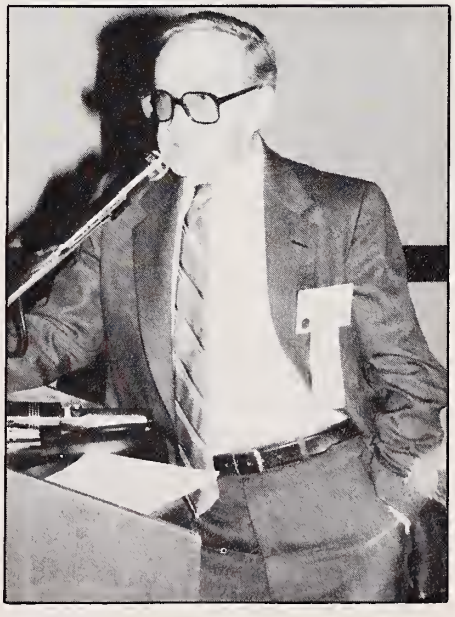
Adopted *as amended:* "RESOLVED, that MAG endorse the concept of medical school/STD treatment facility affiliation to provide supervised clinical training in STD for all medical students or physicians in training, and that this resolution be forwarded to the AMA House of Delegates for implementation."



John B. Hunt, Valdosta, of Reference Committee D.



Philip Z. Israel, Marietta, also served on Reference Committee D.



Louis Felder, an Atlanta internist, expresses his views before the Committee.

Report of Reference Committee F

H. Duane Blair, M.D., Chairman
Luther M. Thomas, Jr., M.D., Vice-Chairman

During its meeting of April 26, Reference Committee F gave careful consideration to its referred reports and resolutions. The following physicians were members of that Committee: H. Duane Blair, Chairman, Decatur; Luther M. Thomas, Jr., Vice-Chairman, Augusta; C. E. Johnson, Jr., Macon; Charles R. Underwood, Marietta; Gwynne T. Brunt, Jr., Atlanta; Marvyn D. Cohen, Columbus; Frank F. Middleton, III, Albany, and Joe L. Griffeth, Commerce.

Treasurer

Cyler D. Garner, M.D.



Cyler D. Garner, M.D., a family practitioner from Gordon, serves as Treasurer of the MAG.

The current fiscal year, which began June 1, 1984, has been a year of change leading to a restructuring of our financial position. MAG began this year with a budgeted excess of *expense* over revenue of $123,783 even with a significant dues increase. As we progressed through the year it was apparent that this budgeted deficit was somewhat optimistic. Staff over projected computer revenues by some $62,500, budgeted computer expense did not include $51,000 in funds for depreciation and maintenance of newly purchased equipment needed to meet PRO requirements, interest income had been budgeted based upon earnings in prior years when cash balances and interest rates were higher, and budgeted depreciation for building and equipment was considerably less than actual audited expenses.

The point is, there were periods where I envisioned having to stand before the House of Delegates trying to explain a loss approaching the $308,550 deficit incurred during the year ended May 31, 1984. Fortunately, as a result of scraping for every penny and taking advantage of opportunities as they arose, current projections indicate we will end this year with a small, but significant, surplus of $2,057. While the amount of this surplus is not substantial, it does symbolize a change in direction which is of critical importance.

As a result of the purchase of computer equipment and financial losses incurred in previous years, we came within days of needing to borrow funds to pay bills in 1984 and will probably need to borrow funds for a short period in late August and September of 1985. However, this does not indicate financial weakness since we have changed directions and possess a strong balance sheet with a major unencumbered asset — our building. And, should the proposed budget be approved, we will begin to rebuild cash reserves to a desirable level.

This balanced budget is a result of a number of factors. Anyone walking through MAG Headquarters will see new faces, redefined responsibilities, and less staff in total. Rental revenue has been increased by leasing the lower portion of the building.

Membership is increasing due to new efforts in membership recruitment and new initiatives set by MAG and component societies. We have taken advantage of changing the retirement system for MAG staff. This change will produce a return to MAG of portions of prior year contributions and provide a retirement system that better meets the needs of current employees.

We have also made some accounting changes which better reflect MAG's bottom-line. These changes improve information about the cost of operations and help to allocate expenses to years when incurred. These changes are also desirable from a tax standpoint since MAG is always under close scrutiny for unrelated income due to data processing operations and *Journal* advertising.

Budgetarily, we are in a position of having financial information readily available to facilitate future decision-making. We are changing our banking arrangements because the old system did not allow MAG to take advantage of new developments in cash management. The new arrangements will allow MAG to invest, to the penny, funds which are not needed to cover checks clearing on a particular day or to meet minimum balance requirements.

The efforts which produced the projected surplus for this year will not end. Administratively we will continue in the same mode and look to find other savings during the coming year. For example, it is now time to rebid long standing service contracts to insure MAG is receiving the best deal for the dollars expended and we continue to evaluate ways to tighten up the computer budget.

Regarding the 1986 budget, I urge you to carefully consider the proposal. You will note proposed expenditures for 1986 are actually less than budgeted expenditures for 1985 by $24,516. This is significant considering the fact that 1986 includes funds for pay raises, normal inflationary increases and other expense items resulting from changes in accounting procedures.

The budget as adopted by the Board of Directors provides an excess of *revenue* over expense of $102,213. This surplus, if approved by the House of Delegates, will begin to rebuild cash reserves and insure that

your Association will stay financially strong.

Recommendations

1. The initial annual budget submitted to the House of Delegates by the Board of Directors shall propose expenditures *no* greater than anticipated revenues. In addition to reasonably anticipated expenditures included in the annual budget, the Board of Directors, in fulfilling its duties, may spend to a limit of 10% of the unencumbered value of assets of the Association should unexpected circumstances arise. If funds in excess of this limit are needed the excess must be referred to a called meeting or the next annual meeting of the House of Delegates for approval.
2. *(Discussion: Five county medical societies currently handle billing for county, district, MAG, and AMA dues. Counties performing these billings are MAA, Bibb, Georgia Medical Society, DeKalb, and Muscogee. Several counties are continually late remitting dues to MAG and AMA, and, in fact, one county medical society has been as late as 3 months this year. Late remittances make it difficult for MAG to budget, project cash flows, and determine membership for the Roster and other mailings. More importantly, MAG finds itself in an unenviable position of sending reminder notices to members who have paid their counties but have not had their dues remitted to MAG. Accordingly, the Finance Committee endorses the following recommendation:)*
   MAG should perform billing for all county medical societies with the stipulation that MAG will pay interest (based upon 3 month Treasury Bill rate) for payments which are not mailed to each county medical society within 10 working days following the end of the month of collection.



(L to R) H. Duane Blair, Decatur, Chairman of Reference Committee F; Luther M. Thomas, Jr., Augusta, Vice-Chairman; and Gwynne T. Brunt, Jr., Atlanta.



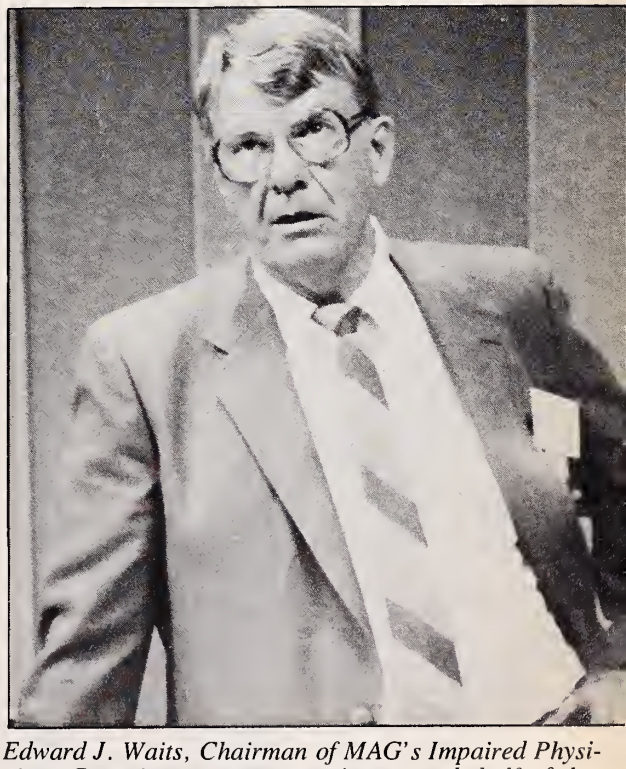
Among those serving on Reference Committee F were (L to R) Charles R. Underwood, Marietta; C. E. Johnson, Jr., Macon; and Frank F. Middleton, III.

House Action

Accepted the treasurer's report with commendation.

Recommendation 1: Adopted *as amended:* <u>In recognition of the fact that the Board of Directors must have some flexibility and to ensure the financial viability of MAG, a "balanced budget" is desirable.</u> The initial annual budget submitted to the House of Delegates by the Board of Directors shall propose expenditures no greater than anticipated revenues. In addition to reasonably anticipated expenditures included in the annual budget, the Board of Directors, in fulfilling its duties, may spend to a limit of 10% of the unencumbered value of assets of the Association should unexpected circumstances arise. If funds in excess of this limit are needed, the excess must be referred to a called meeting or the next annual meeting of the House of Delegates for approval.

Recommendation 2: Did not adopt.



Edward J. Waits, Chairman of MAG's Impaired Physicians Committee, presents testimony on behalf of that Committee to Reference Committee F.

Report of the Chairman of the Board of Directors

MAG Budget 1985-86

Category	*1985-1986 Proposed Budget*	*FY 1985 Budget*	*Projected Expenditures thru May 31, 1985*
Revenues			
Membership Dues (current)	$1,400,000	$1,391,245	$1,400,000
New Members (projected)	90,000	—	—
Dues Increase ($25)	119,000	—	—
Resident Dues	5,000	—	2,000
Advertising Sales	120,000	101,000	101,000
Risk Management	10,000	8,000	8,500
Scientific Assembly	39,125	4,000	4,000
Leadership Conference	17,500	10,000	10,000
Journal Subscriptions	6,500	6,500	6,500
AMA Refund	8,000	6,500	6,500
Data Processing	242,000	303,000	275,000
Interest Income	30,000	72,000	35,000
Rental Income	30,800	3,500	16,300
Miscellaneous Income	40,000	50,600	75,000
Retirement Plan Adjustment	—	—	25,000
Physician Placement	2,200	2,300	2,000
Total Revenue	$2,160,125	$1,958,645	$1,966,800
Expenditures			
Administration	$ 856,362	$ 904,333	$ 864,157
Membership Services	132,115	118,571	108,434
Building	162,952	136,653	146,820
Journal	148,491	128,895	142,259
Data Processing	363,579	352,555	351,349
Other	8,600	13,600	11,600
Board Contingent	70,000	140,000	80,000
Committees	315,813	287,821	260,124
Total Expenditures	$2,057,912	$2,082,428	$1,964,743
Excess of Revenue over Expense Recommended BUDGET	$ 102,213	$ (123,783)	$ 2,057

BUILDING

Expenditure Category	*1985-1986 Proposed Budget*	*FY 1985 Budget*	*Projected Expenditures thru May 31, 1985*
Mortgage Interest	$ —	$ 335	$ 334
Building Maintenance	10,000	7,500	9,400
Janitorial Service	17,000	16,600	16,300
Insurance — Casualty	7,900	6,500	7,399
Utilities	37,406	32,000	33,400
Depreciation — Building	37,500	22,300	35,900
Depreciation — Equipment	35,221	27,828	28,500
Ad Valorem Tax	17,925	23,590	15,587
Total — Building	$162,952	$136,653	$146,820

ADMINISTRATION

Expenditure Category	*1985-1986 Proposed Budget*	*FY 1985 Budget*	*Projected Expenditures thru May 31, 1985*
Salaries	$532,172	$615,861	$566,568
Health Insurance	44,200	50,315	39,777
Disability Insurance	4,287	4,745	3,992
FICA Tax	31,505	36,147	33,360
Unemployment — State	998	807	945
Unemployment — Federal	1,128	1,008	1,084
Retirement	33,294	31,700	12,326
Recruitment	500	—	1,100
Legal Fees	50,000	30,000	50,000
Legal Expense	2,500	750	2,245
WATS-Outward	5,500	5,500	5,016
WATS-Inward	8,800	7,800	8,052
Telephone	29,400	30,000	26,900
Postage	32,822	28,000	30,020
Staff Travel	27,820	26,000	25,800
Printing	2,500	2,700	1,900
Dues & Subscriptions	2,600	2,000	2,543
Audit	8,000	5,500	6,500
Office Supplies	14,000	12,000	13,822
Xerox Maintenance	7,836	2,500	5,500
Retirement Trust Fee	2,000	1,000	1,800
Equipment Maintenance	10,500	10,000	9,300
Temporary Help	4,000	—	5,600
Life Insurance Annuity	—	—	10,007
Total — Administration	$856,362	$904,333	$864,157

MEMBERSHIP

Expenditure Category	*1985-1986 Proposed Budget*	*FY 1985 Budget*	*Projected Expenditures thru May 31, 1985*
Travel-President	$ 4,000	$ 4,000	$ 4,000
Travel — President-Elect	4,000	3,200	2,000
Travel — Past President	3,000	1,500	2,000
Travel — AMA Delegates	33,500	32,056	32,389
Caucus Breakfast	1,600	1,800	1,314
Headquarters Suite	3,900	3,800	2,258
Southeastern Coalition	2,900	2,900	2,402
Travel — Secy & Treas to AMA	5,600	5,100	4,790
2 MD's to AMA Leadership	1,600	1,500	1,400
AMA MSS — Annual Session	1,100	1,000	1,000
AMA MSS — Travel	2,740	2,740	2,740
State Medical Education Lunch	375	375	—
Sundry	600	600	—
Executive Committee-Provisional	6,000	6,000	1,500
Executive Committee — Travel	8,700	6,000	4,000
Business Coalition	4,000	4,000	4,000
Meetings	9,000	5,000	7,000
President — Provisional Fund	24,000	24,000	20,000
Roster	12,500	10,000	12,641
Proceedings Issue	3,000	3,000	3,000
Total — Membership	$132,115	$118,571	$108,434

DATA PROCESSING

Expenditure Category	*1985-1986 Proposed Budget*	*FY 1985 Budget*	*Projected Expenditures thru May 31, 1985*
Salaries	$103,265	$123,501	$ 90,458
FICA Insurance	7,280	8,645	6,332
Health Insurance	9,174	13,690	7,200
Disability Insurance	1,030	—	768
Retirement	6,834	3,628	1,249
Unemployment — State	545	—	493
Unemployment — Federal	525	—	473
Insurance — Equipment	1,100	600	715
Equipment — Rental	49,500	48,149	45,830
Equipment Maintenance	48,300	25,878	40,045
Data Communications	4,800	2,434	3,872
Service Contracts	—	2,400	—
Supplies — Durable	3,176	2,500	2,941
Supplies — Expendable	19,900	8,000	18,132
Software Documentation	21,583	41,800	22,150
Installation/Site Prep	2,000	29,235	8,235
Depreciation	66,911	26,000	64,794
Travel	3,000	2,200	4,460
Education & Dues	500	4,700	485
Consulting Fees	7,500	600	26,000
Temporary Help	200	400	241
Recruitment	275	2,550	490
Office Operation	6,181	5,645	5,986
Total — DP	$363,579	$352,555	$351,349

JOURNAL

Salaries	$ 40,275	$ 36,311	$ 37,995
Health Insurance	4,350	5,892	4,026
FICA	2,839	2,192	2,360
Retirement	2,822	2,300	525
Printing	81,000	68,000	81,000
Photo Processing	400	200	360
Advertising Promotion	1,000	300	—
Postage	9,200	7,900	8,200
Clipping Service	480	450	425
Dues & Subscriptions	225	200	170
Artwork	4,100	3,700	4,298
Mailing Labels	—	650	—
Travel	1,800	800	2,900
Total — *Journal*	$148,491	$128,895	$142,259

OTHER

Franklin Benefits	$ 3,600	$ 3,600	$ 3,600
Campaigns	5,000	10,000	8,000
Board Contingent	70,000	140,000	80,000
Total — Other	$ 78,600	$ 153,600	$ 91,600

COMMITTEES & SPECIALTY SOCIETIES

Expenditure Category	*1985-1986 Proposed Budget*	*FY 1985 Budget*	*Projected Expenditures thru May 31, 1985*
Access to Health Care	$ 4,000	$ 4,700	$ 3,800
Annual Session	21,000	15,185	21,000
Auxiliary	43,064	38,175	36,321
Cost Awareness	1,000	2,000	700
Doctor-of-Day Program	5,830	5,500	4,960
Impaired Physicians	16,049	63,000	57,250
Legislative & Bulletin	65,000	44,376	45,000
Physician Involvement	4,900	4,350	4,000
Health Planning	—	500	—
Education	2,875	4,500	4,000
Medical Aspects of Sports	1,700	200	—
Nutrition	500	—	—
Physician-Lawyer Liaison	4,650	4,950	2,000
Membership Insurance	1,500	1,360	1,000
Public Relations (Option I)	50,000	60,000	35,000
Scientific Assembly	39,125	10,125	10,520
Newsletter	13,100	11,900	10,673
Third Party Relations	2,520	6,250	2,900
Leadership Conference	17,500	6,000	17,500
Computer Education	1,500	4,750	1,500
Resident Project	3,900	—	—
Public Health	3,000	—	—
Medical Student Section	1,100	—	—
Medical Schools	1,000	—	—
Membership	11,000	—	2,000
Total Comm. & Spec. Soc.	$315,813	$287,821	$260,124

House Action

The budget was adopted as amended:

- *RESIDENT DUES* increased to $8,500 in anticipation of an offer by MAG Mutual to pay resident dues for one year;
- *DUES INCREASE ($25)* changed to $166,600 by increasing dues $35 with $10, or $47,600, of this increase required to fund the Impaired Physicians Program. The Committee heard considerable testimony which emphasized the success of the Impaired Physicians in returning physicians to practice, as well as the great public relations value to MAG of the program. In view of this, the Committee felt the budget for Impaired Physicians should be increased.
- *TOTAL REVENUE* changed to $2,211,225;
- *COMMITTEES AND SPECIALTY SOCIETIES, IMPAIRED PHYSICIANS* increased to $50,000;
- *COMMITTEES AND SPECIALTY SOCIETIES, RESIDENT PROJECT* increased to $7,200. This increase which provides sufficient funding for resident projects during the year is made possible by MAG Mutual's funding of resident dues.
- Changing the *TOTAL COMMITTEE AND SPECIALTY SOCIETY* to $353,064.
- Changing *TOTAL EXPENDITURES* to $2,095,163.
- Change *EXCESS OF REVENUE OVER EXPENSE* to $116,062.

Resolution 19

Affiliate Member Administrative Fee

F. William Dowda, M.D., Delegate
Medical Association of Atlanta

RESOLVED, that the MAG House of Delegates adopt an administrative fee for affiliate members which is commensurate with its cost to the MAG.

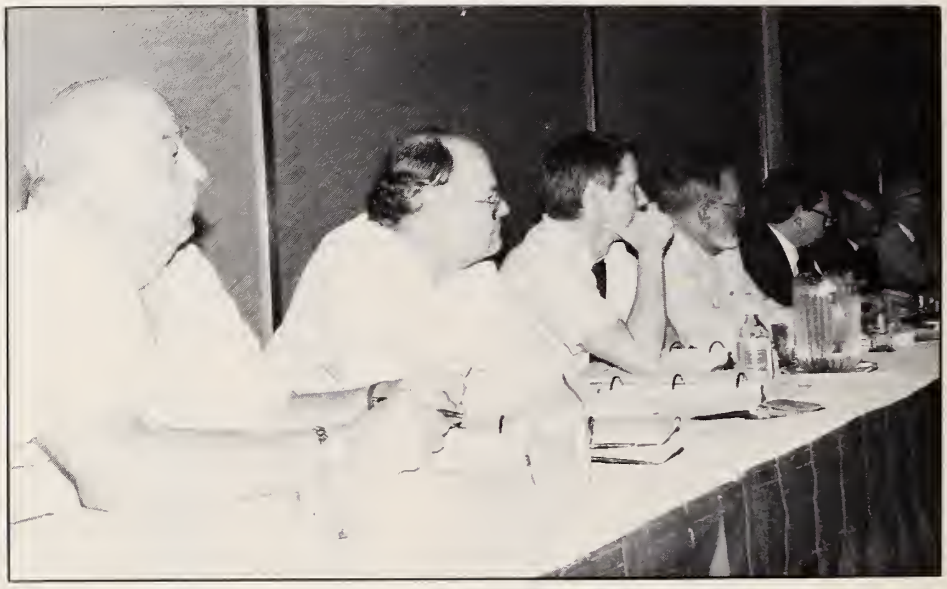
House Action

Did not adopt.

Report of Reference Committee G

Richard W. Cohen, M.D. Chairman
Charles A. Lanford, M.D., Vice-Chairman

During its meeting of April 26, Reference Committee G gave careful consideration to its referred reports and resolutions. The following physicians were members of that Committee: Richard W. Cohen, Chairman, Austell; Charles A. Lanford, Vice-Chairman, Macon; Dan H. Willoughby, Savannah; James W. Estes, Atlanta; James F. Beattie, Jr., Fort Oglethorpe; Ralph A. Tillman, Decatur; Donald C. Abele, Augusta; Lamar H. Waters, Clarkesville; Larry Brightwell, Columbus; and Alva Louie Mayes, Jr., Macon.



Members of Reference Committee G include (L to R): Dan H. Willoughby, Savannah; Larry Brightwell, Columbus; James F. Beattie, Jr., Fort Oglethorpe; Donald C. Abele, Augusta; Richard W. Cohen, Chairman, Austell; Lamar H. Waters, Clarkesville; Ralph A. Tillman, Decatur; and Alva Louie Mayes, Jr., Macon.

Preliminary Report: Ad Hoc Committee on the Georgia Physicians Organization

William D. Logan, Jr., M.D.
Chairman

The House of Delegates, at its called meeting in October 1984, directed MAG's officers and staff to develop a business plan for an MAG-sponsored alternative delivery system. The Ad Hoc Committee was appointed by the Executive Committee in January to oversee this effort. The Ad Hoc Committee met twice and its steering committee held two additional meetings. The Committee unanimously voted to present a plan for a statewide IPA-model HMO to the April House. The plan, as proposed by the Committee, would have the flexibility to negotiate with a variety of payers as circumstances require.

This preliminary report describes briefly the goals, functions and organizational characteristics of the Georgia Physicians Organization. A full business plan is near completion and will be mailed to the delegates prior to the House meeting.

Goals

- Assure high quality of care
- Maximize patients' freedom of choice in selecting a physician
- Preserve physician-patient relationship
- Retain fee-for-service method of payment

The Committee expects that the changes which are now occurring in the medical marketplace will continue and that alternative delivery systems will have a significant market share in Georgia. The best response for Georgia's physicians is to organize an alternative system of their own. In a physician-controlled plan these goals can be met and the highly desirable aspects of medical practice can be retained in the new marketplace.

Functions

- To provide medical care
- To provide peer review, utilization review
- To provide for insurance coverage for physician care and related, physician ordered services
- To pool financial risks and benefits
- To market services

The Georgia Physicians Organization would be an IPA-model HMO. The Georgia Physicians Organization would provide medical care through its individual members. It would conduct stringent peer review to assure high quality and efficiency. It would provide for insurance coverage both for medical services and hospital care and related services. The members — the physicians — would share the risks. They would be partially integrated into a single economic enterprise. They would also share the benefits when the plan is financially successful. The plan would market its services — i.e., medical care and insurance — to employers and other purchasers.

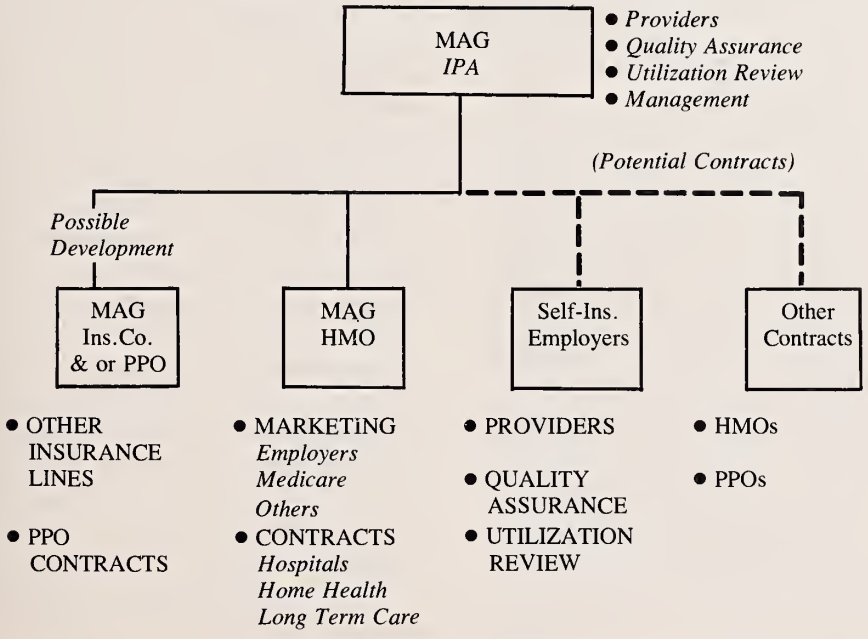
Organization

MAG would, in effect, create a wholly owned subsidiary which would serve as the IPA. Technically, it would be a non-profit membership corporation with MAG as the sole member. This IPA would be the physician arm whose members provide medical services. The IPA would also act as a holding company and form an HMO and, if necessary for competitive purposes, a separate insurance company and/or a PPO. The HMO would contract with the IPA for medical services and with hospitals and other institutions for in-patient



Members of Reference Committee G (L to R): James F. Beattie, Jr., Fort Oglethorpe; Donald C. Abele, Augusta; Richard W. Cohen, Chairman, Austell; Charles A. Lanford, Vice Chairman, Macon; and Lamar H. Waters, Clarkesville.

GEORGIA PHYSICIANS ORGANIZATION



care and related services. An insurance company and/or PPO would enable the MAG plan to market a fuller range of products to interested groups. The holding company would also have the capacity to contract with self-insured employers and other HMOs.

* * *

Membership of Ad Hoc Committee

* William D. Logan, M.D., Atlanta — Thoracic Surgery, *Chairman*
* S. William Clark, Jr., M.D., Waycross — Ophthalmology
* William Dowda, M.D., Atlanta — Internal Medicine
* John Watson, M.D., Columbus — Radiology
* Virgle McEver, M.D., Warner Robbins — General Surgery
William Jones, M.D., Gainesville — Urology
Joseph Almand, M.D., LaGrange — Pediatrics
Richard Cohen, M.D., Austell — Orthopedic Surgery
Robert Simmons, M.D., Dalton — Family Practice
Luther Thomas, M.D., Augusta — Internal Medicine
Robert Logan, M.D., Savannah — Otolaryngology
Stephen Boyle, M.D., Conyers — General Surgery
Louis Felder, M.D., Atlanta — Internal Medicine
Lanny Copeland, M.D., Moultrie — Family Practice
Joseph Turner, M.D., Tifton — Internal Medicine
O. Grey Rawls, M.D., Albany — General Surgery
Fleetwood Maddox, M.D., Macon — Ophthalmology

* Denotes Steering Committee member

GLOSSARY

Alternative Delivery System (ADS) — A generic term encompassing health care systems other than traditional private practice. The term includes HMOs, IPAs, and PPOs. ADSs achieve cost savings through a combination of discounts and utilization management.

Health Maintenance Organization (HMO) — A pre-paid health plan which offers insurance coverage and professional and institutional care in a single package.

Individual Practice Association (IPA) — IPA usually refers to an open panel model HMO. It also can mean the physician-services arm of the HMO as distinct from the insurance arm. In the context of this report, IPA has the latter meaning.

Preferred Provider Organization (PPO) — An arrangement in which providers offer fee discounts and agree to utilization management in return for which the plan provides financial incentives for patients to use members of the preferred provider panel.

Presentations To MAG Members

Members of the Steering Committee and staff made 26 presentations on the plan to MAG members. Information was also published in the December and March issues of the *Journal*.

Newton-Rockdale	December 4
Georgia Medical Society	December 11
Hall	December 13
MAG Board of Directors	January 12
Peach Belt (Houston County Hospital Staff)	January 14
Douglas	January 21
Richmond	January 22
Muscogee	January 22
Richmond (University & St. Joseph's Hospital staffs)	January 30
Leadership Conference	February 2
DeKalb	February 18
Second District	February 21
Walker-Catoosa-Dade	February 26
Cobb	March 5
Troup	March 7
Gwinnett-Forsyth	March 8
Floyd-Polk-Chattooga	March 12
Medical Association of Atlanta	March 12
Crawford W. Long	March 13
Carroll-Haralson	March 14
Stephens-Rabun	March 21
Dougherty	March 26
Newton-Rockdale	March 26
Tenth District	March 30
Clayton-Fayette	April 2
Bibb	April 16 (scheduled)

Report of the Ad Hoc Committee on the Georgia Physicians Organization

William D. Logan, Jr., M.D., Chairman

The preliminary report of this Committee reviews the work of the Committee and describes the goals, functions, and organization of the proposed MAG-sponsored IPA-model HMO. The following first attachment to this report constitutes the business plan. It contains a description of the organizational characteristics and capitalization plan. Also attached are: a memorandum on antitrust considerations; a brief case history of the Physicians Health Plan of Minnesota; and a summary of a utilization management system, exemplifying that which would be instituted by the MAG-sponsored IPA/HMO.

In submitting the business plan and these other documents to the House, the Committee wishes to emphasize four crucial points.

1. Alternative delivery systems will develop in Georgia whether or not MAG acts favorably on this report. They will penetrate the market in Georgia to a significant degree. They will affect the practices of all physicians in private practice, many of whom will participate with one or more plans, whether the plans are creatures of organized medicine or of other corporations.
2. The impact of alternative delivery systems will be felt by practicing physicians far beyond the metropolitan areas. Medicare and Medicaid will soon enter into capitation contracts for their beneficiaries. This development will pervade the small towns and rural areas of the state as well as the major cities.
3. Physician-sponsored IPA-model HMOs can succeed in the market place. Their success creates benefits for physicians which will not be realized in any other fashion.
4. Time is running out. While the HMO market in Georgia is far from mature, it is developing rapidly. Plans are growing and are expected to consolidate. If MAG delays action, entering the market place will be more difficult and the chances of success will be diminished.

The Ad Hoc Committee respectfully submits this plan to the House and strongly recommends its adoption.

ATTACHMENT I — BUSINESS PLAN

Organizational Structure

The creation of the MAG Individual Practice Association (the "MAG IPA") and the MAG Health Maintenance Organization (the "MAG HMO") would involve the formation of two new entities: the MAG IPA, a nonprofit corporation, and the MAG HMO, a for-profit corporation. As described in detail below (and as indicated in the chart at the end), MAG's physician-members would have the opportunity to participate in both of these entities.

The MAG IPA. The MAG IPA would be formed to provide a vehicle for the delivery of physician services and utilization review. Initially, the MAG IPA would serve as the link between (a) the MAG HMO (the entity which would enter into individual or group contracts and agree to provide physician and hospital services to subscribers on a pre-paid basis), and (b) the individual participating physicians who would actually provide those services. The MAG IPA would be a nonprofit corporation, having MAG as the sole member (for-profit corporations have shareholders; nonprofit corporations do not issue shares of stock and therefore have members); this arrangement would vest in MAG the right to control the governance and day-to-day operations of the MAG IPA.

Subject to approval by the Georgia Insurance Department, eligibility for participation in the MAG IPA could be limited to those MAG physician-members who pay the participation fee; on the other hand, marketing or other concerns may require that non-member physicians or dentists be allowed to participate — perhaps upon the payment of a larger participation fee. In either case, each participating provider would enter into a participation contract with the MAG IPA, pursuant to which the participating provider would agree (a) to provide services — on a non-exclusive basis (that is, without restriction as to other payment arrangements in which the provider may also participate) — to the MAG HMO's subscribers, and

(b) to render those services in accordance with stringent utilization review and quality assurance programs. Participating providers would be paid by the MAG IPA on a fee-for-service basis, with a certain percentage of the fee withheld and at risk — that is, if the MAG IPA were successful, all or part of the withhold would be returned to the participating providers; if not, the "withhold" would be retained by the MAG IPA in order to cover its costs. It is presently contemplated that there would be several regional or local risk pools, as opposed to one statewide risk pool among all participating providers, so that the success of the MAG IPA in any given geographical area may vary depending on the results in that geographical area.

MAG, as the sole member of the MAG IPA, would have the right to elect all of the members of the MAG IPA's Board of Directors. The MAG IPA Board of Directors would consist of an appropriate geographical and specialty balance of physician members, consistent with participation in the organization. The Board, in turn, would have the sole authority to elect the officers of the MAG IPA.

As stated above, the MAG IPA would enter into an agreement with the MAG HMO pursuant to which the MAG IPA would be responsible for arranging for the provision of all physician services (by and through the participating providers) to the MAG HMO's subscribers. In return, the MAG HMO would pay the MAG IPA on a negotiated capitation basis. Finally, as reflected on the attached chart, the MAG IPA would have flexibility to enter into other agreements for the provision of medical care services, if and when appropriate, with other payors such as insurers, self-insured employers, PPOs, etc.

The MAG HMO. The resolution adopted by the House of Delegates at its October, 1984, Special Session contemplated the MAG's physician organization would "contract for the provision of medical services . . . to appropriate payment mechanisms (e.g., insurance companies, health maintenance organizations, fiscal intermediaries, self-insured employees, etc.). . . ." One such payment mechanism would be the MAG HMO, which would be organized as a for-profit corporation, having two classes of stock: (a) voting common stock, all of which would be owned by the MAG IPA; and (b) either preferred stock or non-voting common stock which would be offered to all MAG physician-members — not only those who choose to become participating providers but also those simply desiring to support MAG's efforts by investing in the HMO. It is anticipated that these physician investors would be offered the opportunity to purchase up to a maximum number of shares (perhaps five) of the preferred or non-voting common stock, at a price of (perhaps) $1,000 per share. Transferability of this stock would be limited, with the MAG HMO having the right of first refusal to purchase any stock sought to be sold by the physician investors. In addition, regardless of whether the MAG HMO were to exercise its right of first refusal, the transferability of the stock would be further restricted such that only MAG's physician-members could hold the preferred or non-voting common stock.

The MAG HMO would enter into several different types of contractual arrangements. It would contract with hospitals for the provision of hospital services to the MAG HMO's subscribers. Also, as indicated above, it would enter into an agreement with the MAG IPA for the provision of physician (and, perhaps, dental) services, and it would enter into individual and group contracts with subscribers. It is also expected that the MAG HMO would enter into other contractual arrangements — such as for management, reinsurance, etc.

In order to be authorized to do business in Georgia, the MAG HMO would be subject to regulation by the Georgia Insurance Department and the Georgia Department of Human Resources. Accordingly, the MAG HMO would need to comply with several statutory provisions. Among other things, the Board of Directors (which would be elected by the MAG IPA, as the sole voting shareholder), would need to be comprised of at least one-third "public directors."



William D. Logan, Jr., M.D., answers questions from the membership regarding MAG's proposal for an IPA HMO which was the sole issue addressed by Reference Committee G.

According to the Regulations promulgated by the Insurance Department, these public directors would need to represent broad segments of the subscriber population and would have to possess the appropriate background and experience in order to render meaningful service to the MAG HMO.

The MAG HMO would also be required by statute and regulations to have a number of written policies and procedures, in order, for example, to provide for the collection, processing, maintenance, storage and retrieval of information; to provide for an organized plan of ongoing quality assurance; to deal with subscriber and provider complaints; and to govern the administrative and professional services rendered to and on behalf of the MAG HMO. In addition, the MAG HMO would be required to provide for subscriber participation in matters of policy and operation, such as through the use of advisory referenda on major policy decisions.

At present, it is contemplated that the MAG HMO may not initially become a federally-qualified HMO — primarily in order to minimize the amount of start-up time involved in getting the MAG HMO operational and, also, in order to avoid certain statutory and regulatory constraints which are imposed upon federally-qualified HMO's. Once the MAG HMO is operational, however, consideration would be given to seeking federal certification or to the forma-

tion of a second, similar entity designed to qualify under the federal HMO law. Federal certification would probably be an advantage in the general market and would also facilitate the MAG HMO's access to Medicare patients and large employers.

Capitalization

As a result of its being regulated by the Insurance Department, the MAG HMO would have to meet certain minimum capitalization requirements, and would have to provide certain minimum deposits to the Insurance Department. The minimum capitalization for the MAG HMO required by the Insurance Department would be $1.2 million; however, the ad hoc committee, as it considered the project, determined that an appropriate minimum capitalization for a project of this magnitude would be more in the neighborhood of $2 to $2.5 million. The MAG HMO would propose to obtain its capitalization (a) through the sale of preferred or nonvoting common stock to physician investors, and (b) through contributions from the MAG IPA (using the participation fees obtained by the MAG IPA from participating providers). It is also expected that the MAG HMO would obtain some capital through the establishment of lines of credit with appropriate financial institutions.

MAG would provide appropriate staff support and extend a line of credit for startup expenses to the MAG IPA/MAG HMO of up to $200,000 with an additional $100,000 available at the discretion of the MAG Board of Directors. This loan will be repaid to MAG with interest at the earliest reasonable time.

Recommendation

The Ad Hoc Committee on the Georgia Physicians Organization recommends the adoption of this business plan in its entirety.

House Action

Adopted, as amended, with commendation, so that the final paragraph of Attachment I reads as follows: "MAG would provide appropriate staff support at appropriate, mutually agreed cost and extend a line of credit for start up expenses to the MAG IPA/HMO of up to $300,000 ~~$200,000 with an additional $100,000 available at the discretion of the MAG Board of Directors~~. This loan will be repaid to MAG with interest at the same interest as the lines of credit with appropriate financial institutions at the earliest reasonable time.

ATTACHMENT II — LETTER TO MAG EXECUTIVE DIRECTOR FROM WILLIAM G. KOPIT, ATTORNEY, OF EPSTEIN, BECKER, BORSODY & GREEN, P.C., WASHINGTON, D.C.

This is in response to your request for information concerning the antitrust consequences associated with the creation of an independent practice association ("IPA") subsidiary which could, in time, develop its own health maintenance organization ("HMO"). Admittedly, health delivery and/or financing system controlled by physicians creates certain antitrust issues that must be addressed. However, we believe such an organization can maintain risks within acceptable levels. We understand the facts are as described below.

The Medical Association of Georgia ("MAG") would be the sole shareholder of the IPA. The IPA may wish to limit participation to physicians that are members of MAG. Moreover, it is anticipated that approximately one-half of the MAG membership may wish to participate in the IPA. We have been informed that participants in the plan will not be prohibited from participating with other prepaid plans.

It is anticipated that the IPA could serve two functions. It would operate as a physician panel, under contract with selected HMOs, including, for example, any HMO developed by Blue Cross. Such contracts would not be exclusive in nature; both the IPA and any contracting HMO would be permitted to contract with other parties. It is also anticipated that the IPA could finance separate subsidiaries to operate a state licensed HMO, a federally qualified HMO, and possibly a state licensed insurance company. In any event, the IPA would provide the participating physician panel for the subsidiaries. Moreover, individual physicians could be offered the opportunity to become shareholders in the subsidiary HMO, although the IPA would retain a controlling interest. MAG may wish to limit ownership in the HMO subsidiary to members of MAG.

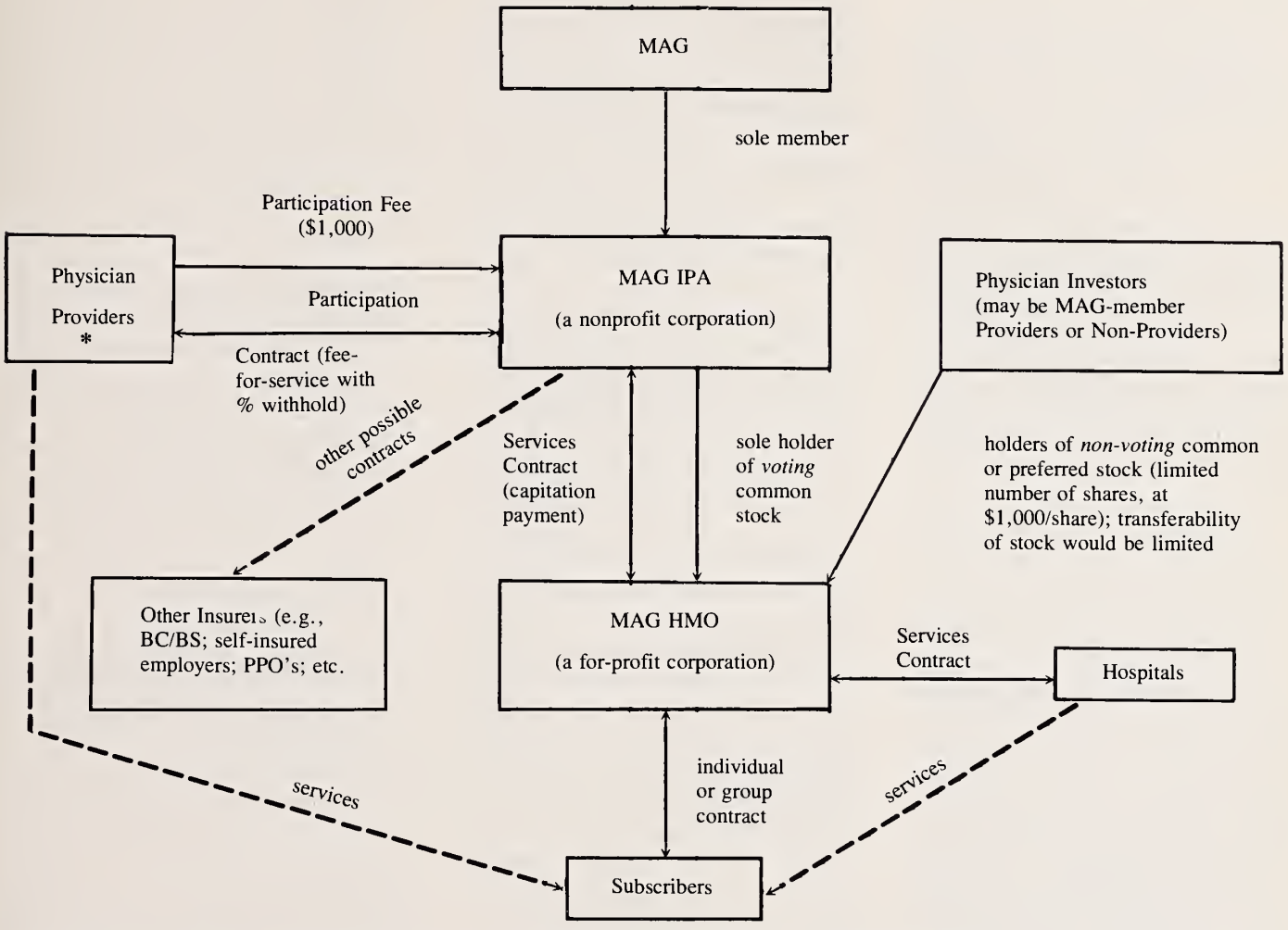
The federal antitrust laws[1] generally prohibit aggregations of market power which could lead to anticompetitive market conditions. Section 1 of the Sherman Act, 15 U.S.C. §1, prohibits joint action that restrains trade unreasonably. *See generally Chicago Board of Trade v. United States,* 246 U.S. 231 (1919). In the context of a prepaid health care plan, conduct that typically raises concerns under Section 1 includes establishment of reimbursement levels for providers, and the establishment and application of criteria for participation.[2]

The activities of MAG, and any physician-controlled IPA and/or HMO, could be characterized as joint action subject to the antitrust laws.

[1] Application of the federal antitrust laws is limited to restraints that are in interstate commerce or which affect interstate commerce. In this regard, it is likely that a health insurance/delivery system network established by MAG would meet federal jurisdictional requirements. *See Arizona v. Maricopa County Medical Society,* 102 S. Ct. 2466 (1982). State law, although apparently not as broad as federal law, renders contracts in restraint of trade unenforceable, *see* Ga. Code § 13-8-2; *Rash v. Toccoa Clinic Medical Associates,* 253 Ga. 322 (1984), and provides for criminal penalties for restraint of trade in dealings with the state. Ga. Code § 16-10-22. It also prohibits the establishment of monopolies. Ga. Const., Art. III, Sec. VI, Part V.

[2] In this context, antitrust concerns arise under Section 1 of the Sherman Act. Similar concerns could be raised as "unfair competition" under Section 5 of the Federal Trade Commission Act, 15 U.S.C. § 45. In view of the competitive conditions in the marketplace, and assuming that the contractual relationships between the IPA, participating physicians and contracting HMOs will not be exclusive, it is unlikely that concerns could arise under Section 2 of the Sherman Act, 15 U.S.C. § 2 relating to monopolies or Section 7 of the Clayton Act, 15 U.S.C. § 18, relating to joint ventures.

Medical Association of Georgia
Proposed Organizational Structure for MAG IPA and MAG HMO



(* May be restricted to MAG members or may be open to all physicians with non-members paying greater participation fee)

Although the actions of a single corporation typically would not meet the joint actions requirement of Section 1, *see, e.g., United States v. Colgate & Company,* 250 U.S. 300 (1919), courts have held that the conduct of a corporation constitutes joint action when the corporation is controlled by competitors. *See, e.g., United States v. Sealy, Inc.* 388 U.S. 350 (1967).

For example, in *Virginia Academy of Clinical Psychologists v. Blue Shield,* 624 F.2d 476 (4th Cir. 1980), *cert. denied,* 450 U.S. 916 (1981). In *Virginia Academy,* a group of psychologists alleged that the physician-controlled Blue Shield plan had engaged in an unlawful boycott by requiring that psychologists' services be billed through physicians. The Blue Shield plan argued that it could not engage in a boycott because it was a single corporation. However, the court looked through the corporate form and held that the conduct of the plan constituted concerted action because the plan was controlled by its members, who were competing physicians.

If the actions of the IPA or HMO are characterized as joint actions, important operational requirements such as the establishment of reimbursement levels or restrictions on participation could form the basis for an antitrust suit against the plan.[3] *See Addino v. Genessee Valley Medical Care, Inc., supra.* In *Arizona v. Maricopa County Medical Society,* 102 S. Ct. 2466 (1982), for example, the Supreme Court held that the establishment of maximum fee schedules by two foundations for medical care was illegal. The foundations contracted with insurers to sponsor the insurers' health plans with the understanding that participating physicians would be paid according to the schedule. The Supreme Court viewed this arrangement as inherently anticompetitive and, held the conduct to be *per se* unlawful. By so doing, the

[3] The actions of MAG, although more likely to be characterized as joint activity, would not seem to be the appropriate focal point for an antitrust challenge relating to the action of the insurance/delivery system, assuming that the IPA or HMO and not MAG has authority over the operational decisions of the plan.

Court refused to consider any justifications offered by the defendants to support the reasonableness of the conduct.

Significantly, the Court distinguished the arrangement in *Maricopa County* from "partnerships or other joint arrangements in which persons who would otherwise be competitors pool their capital and share the risk of loss as well as the opportunities for profit."[4] In such instances, the Court stated that the joint venture would be regarded as a single firm, rather than a cartel. The Supreme Court did not, however, fully describe the factors required for a combination of competitors to be characterized as a joint venture rather than a cartel and, therefore, a unitary entity for antitrust purposes.

Nevertheless, it can generally be stated that a health care delivery system will be characterized as a joint venture if the controlling physicians have a significant financial interest in the success of the system apart from their own fees. Factors relevant to the determination of whether a physician-controlled plan would be characterized as a legitimate joint venture for antitrust purposes include: the amount of capital investment by physicians, the degree of risk assumed by physicians either through a capitation or withhold arrangement, the number of physicians participating in the plan, the nature of competition in the market, and the justifications for restrictions on participation. *See* FTC, Enforcement Policy With Respect to Physician-Controlled Medical Prepayment Plans, 46 Fed. Reg. 48,982 (Oct. 5, 1981); Letter from Arthur Lerner, FTC Bureau of Competition, to Gilbert M. Frimet (March 22, 1984) (hereinafter the "Frimet letter"). Using these criteria, it should be possible to structure an IPA and an HMO that would withstand antitrust scrutiny.[5]

The activities of a physician-controlled plan, which is characterized as a joint venture, will usually be analyzed under the "rule of reason," rather than the *per se* rule because the day-to-day decisions of the plan, including the establishment of fees, are necessary to enable the plan to function at all. *See* 46 Fed. Reg. at 48,991. Under rule of reason analysis, operational decisions of a joint venture physician-controlled plan would not violate the antitrust laws unless they resulted, or were likely to result, in a significant anticompetitive effect. *See id.* Most activities contemplated by MAG would seem to be permissible under this approach. However, an antitrust violation could be found if a physician controlled IPA or HMO with market power implemented a reimbursement policy that increased physician fees above the market level.[6] In such circumstances, it could be inferred that the plan's market power was employed for the benefit of the controlling physicians and that it resulted in a anticompetitive effect.

A second area of concern relates to the possibility that the plan could prevent other prepaid health plans from entering the market by prohibiting, or discouraging, its participating physicians from participating in another plan. Here, it is anticipated that approximately one-half of area physicians could participate in the plan, but all physicians would be free to participate in other arrangements. The FTC has indicated that the number of physicians participating in an HMO would raise concerns only if two-thirds or more of any physicians participated in the plan, 46 Fed. Reg. at 48,991, or if a plan entered into an exclusive relationship with a large percentage of physicians. *See* Frimet Letter, *supra*.[7] Neither of these conditions is present. Thus, absent a course of conduct designed to prohibit the development of alternatives, the arrangement contemplated by MAG should be permissible. In this regard, it is helpful that no exclusive contracts between the IPA and participating physicians or between the IPA and any HMO are contemplated.

Finally, it is important to note that the possible corporate structure as currently contemplated by MAG — a three-tiered parent-subsidiary relationship — should not, itself, create any significant antitrust risk. In *Copperweld Corp. v. Independence Tube Corp.*, 104 S. Ct. 2731 (1984), the Supreme Court created an irrebutable presumption that a wholly-owned subsidiary corporation does not have the capacity to conspire with its parent. The Court reasoned that a parent and its wholly-owned subsidiary have a complete community of interest, *i.e.*, the subsidiary must act for the benefit of the parent which is its sole shareholder. Thus, the Court viewed the wholly-owned subsidiary as indistinguishable from an unincorporated division and held that the affiliated corporations were a single economic entity not subject to Section 1 of the Sherman Act. *See also Zimmerman v.*

[4] The Court identified HMOs, by name, as one type of legitimate joint venture in which the participants share risk. 102 S. Ct. at 2479-80. However, the applicable test to determine whether a physician-controlled organization is a joint venture rather than a cartel is whether there is sufficient pooling of capital and sharing of risk, not whether the entity is labeled an HMO.

[5] There are a number of ways of further reducing antitrust risk. For example, requiring non-MAG members to pay an additional fee, rather than prohibiting their participtiion entirely would be a less risky course of conduct. Similarly, ensuring that competitors do not set particular fee-levels would also provide greater protection.

[6] The Attorney General of the State of Wisconsin has suggested that this concern can be avoided entirely (in the context of a preferred provider organization) by delegating authority over physician reimbursement to an independent entity. 1985-1 Trade Cas. (CCH) ¶66,447 (February 9, 1984). *See also Arizona v. Maricopa County Medical Society*, 1983-1 Trade Cas. (CCH) ¶65,260 (D. Ariz. 1983).

[7] In a speech to the American Bar Association March 22, 1985, J. Paul McGrath, Assistant Attorney General, Antitrust Division, stated that provider-sponsored preferred provider organizations ("PPOs") were not likely to be challenged by the Department of Justice if fewer than twenty percent of the active physicians in the area were participants. For PPOs with greater than twenty percent participation, the Department would analyze the effects of the larger participation in the particular market. It should be noted in this regard that antitrust concerns related to physician-controlled HMOs are typically less than those related to physician-controlled PPOs because participants in a PPO, unlike those of an HMO, typically do not assume risk.

The Board of Publications of the Christian Reform Church, Inc., No. 85-JM-211 (D. Colo. Dec. 7, 1984) (*Copperweld* applicable to nonprofit membership corporation). Significantly, it would seem that this analysis would apply even in the case of a partially owned subsidiary, as long as it is controlled by the parent. *See Magnum Force Distributions v. Bon Bon Company of America, Inc.*, No. CV-84-2629 (E.D. N.Y. Nov. 9, 1984).

I trust that this information will assist you in developing an organizational structure for the MAG proposal. Please do not hesitate to call me, or Robert Moses of our office, if you have any further questions or desire more specific recommendations for the establishment of a corporate structure.

ATTACHMENT III — PHYSICIANS HEALTH PLAN (PHP) OF MINNESOTA: A LESSON FROM HISTORY

PHP was created by the Hennepin County Medical Society in 1975 as a means of offering non-clinic based physicians an opportunity to compete with the community's (mostly closed-panel) HMOs. Marketing of the plan was immediately successful; however, PHP encountered early financial problems. The reason: inadequate (at first non-existent) utilization management.

Hospital days per 1,000 enrollees were nearly 25% above projections. Physician encounters and ancillary services also exceeded projections. PHP lost $550,000 in 1976.

PHP did not immediately understand the nature and magnitude of its problems. (IPAs were new in 1976 and there was little experience to draw on.) PHP did not realize that there were more than a few "abusers," that long-established and widespread habits of practice were the cause of financial problems.

As the financial situation worsened, more stringent utilization controls (and enforcement procedures) were put into effect. The changes were gradual, with piecemeal additions as circumstances dictated, until the present system evolved and matured (see Attachment IV).

After overcoming its initial difficulties PHP has achieved remarkable success. It has surpassed in size the oldest and traditionally largest HMO in Minneapolis-St. Paul. It has over 220,000 members served by the 2,700 physicians in the IPA. (Ninety percent of the area's physicians are in the IPA.) Hospital days have been reduced to about 350 per 1,000 members.

The IPA reported, in 1983, a profit of $5,000,000 (over the withhold). A great percentage of this $5,000,000 was distributed to the participating physicians in the form of incentive payments tied to performance. Some have been paid at a rate of 105% of their usual fees.

In compiling a brief history of PHP's early years, PHP's staff expressed the hope that "these experiences will be educational for other plans faced with similar decisions and circumstances in the future."

The lesson is clear: physician-sponsored IPAs can be successful IF, from the outset, they squarely face the need for stringent and enforceable utilization controls.

ATTACHMENT IV — UTILIZATION MANAGEMENT: AN EXAMPLE FROM A SUCCESSFUL PHYSICIAN-SPONSORED IPA

By area of impact, key elements of PHP's utilization/cost control system as it presently exists are as follows:

Hospital services

- prior approval of all non-emergency admissions and lengths of stay
- disciplinary procedures: failure to follow procedures results in *all* instances in denial of the doctor's fees
- detailed review of hospital emergency room use — by physician and by member — denial of inappropriate claims, disciplinary action against problem physicians
- significant hospital emergency room copayments

Mental Health/Chemical Dependency Care

- fixed per capita cost contract for all mental health/chemical dependency services
- triage system to approve all non-emergency in- and outpatient care in advance
- member copayments

Physician Office Services

- fee ceilings applicable to every medical procedure — same maximum applicable to all doctors who perform a given procedure
- frequent comparison of physicians in each specialty against their peer doctors from the same specialty: to identify abuse of office services

Outpatient Prescription Drug Services

- fixed per capita cost contract with pharmacists
- frequent pharmacy cost audits
- frequent profiling of prescribing habits of Plan doctors
- profiling of member use to identify Rx abuse
- implementation of Maximum Allowable Cost (MAC) program under which the payment to the pharmacy is based on the lowest cost, generally equivalent prescription available in the area
- limitations on pharmacy markups at the 90th percentile of all participating facilities in the plan

Out-of-Plan Referrals

- all require prior written approval of PHP management
- inappropriate referrals by physicians result in all cases in loss of fees

Group Rating

- establishment of initial rates at levels which allow the plan to compete effectively in all groups and enroll a balanced cross-section of health risks
- experience rating all enrolled groups

Marketing/Other

- contract language to allow denial of claims for unauthorized use of

non-participating providers, failure to follow mental health/chemical dependency protocols, inappropriate use of hospital emergency room, medically unnecessary services and supplies
- training of marketing staff and preparation of new member material to emphasize member responsibilities in using the system

Resolution 13

Georgia Physicians Organization

DeKalb Medical Society

RESOLVED, that the proposed Georgia Physicians Organization not be implemented.

House Action

Did not adopt.

Resolution 15

Formation of a Physician Organization

MAG Executive Committee (10/12/84)

RESOLVED, that MAG develop a business plan leading to the formation of a physician organization designed to perform the following functions:

- Assemble one or more groups of physicians (on a statewide, regional or local basis) committed to providing high quality medical care on a fee-for-service basis — subject to rigorous peer review and utilization management and involving some limited pooling of financial risks and benefits among the individual members of each physician group; and
- Market and, where appropriate, contract for provision of medical services by any such physician group to appropriate payment mechanisms (e.g., insurance companies, health maintenance organizations, fiscal intermediaries, self-insured employers, etc.) on a basis designed to retain for the group and/or its physician members some portion of the overall health care cost savings effected by the physician members of the group; and
- Encourage the formation of additional physician groups committed to the same principles by providing or arranging for technical assistance, peer review, utilization management, and other services as may be appropriate, such as marketing, negotiating, or contracting assistance.

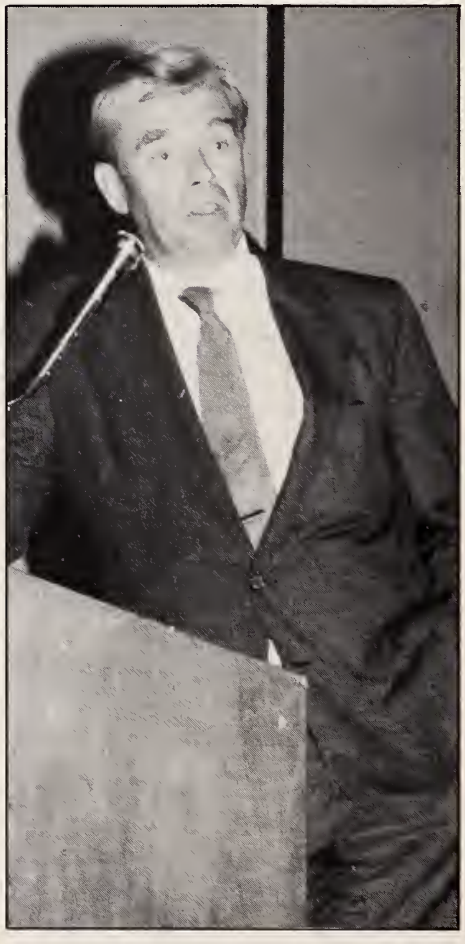
Prior to implementation, the plan as developed must be brought back to the next House of Delegates.

Editorial Note

This resolution was adopted by the House at its Special Called Meeting in October, 1984. It was acted upon by Ad Hoc Committee on the Georgia Physicians Organization and resulted in the business plan which was presented to the April, 1985, House in the report of the Ad Hoc Committee.



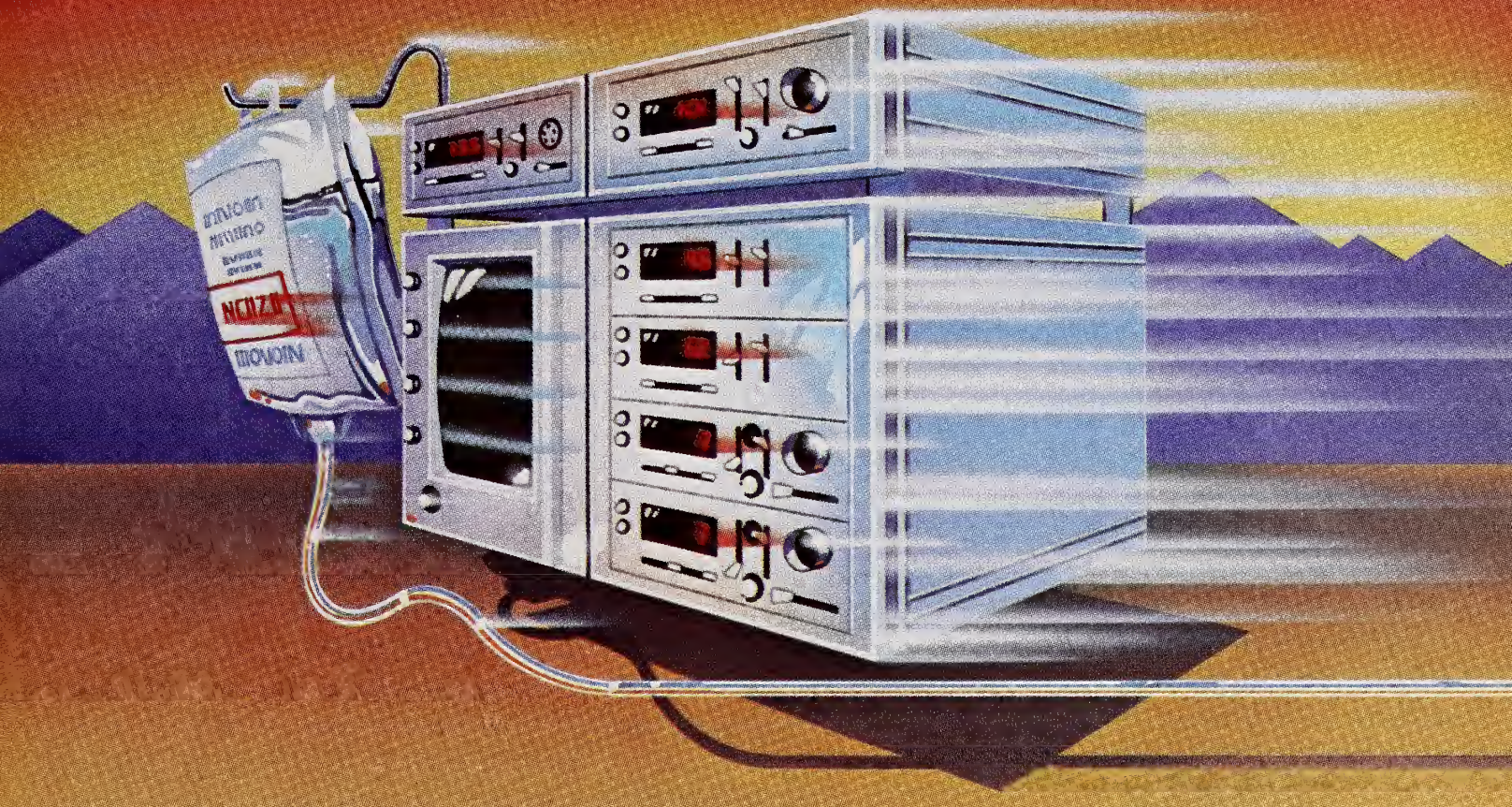






Several MAG delegates expressed their views on MAG policy, ranging from the IPA HMO concept and public relations to HTLV-III testing and public health.

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Other Programs: Recovering Professionals Program for Addictive Disease; Intervention Services; Employee Assistance Program; Outpatient Addictive Disease

For further information contact:

Medical Director: John Hardman, M.D.
Hospital Administrator: Jim Eyler

Charter Lake Hospital

3500 Riverside Drive
Macon, Georgia 31209
(912) 474-6200

Beds: 80
Psychiatric Staff: 12
Programs: Adult and Adolescent Psychiatric; Adult and Adolescent Addictive Disease.

For further information contact:

Medical Director:
Jack A. Morgenstern, M.D.
Hospital Administrator: Tom McDaniel

Charter Broad Oaks Hospital

5002 Waters Avenue
Savannah, Georgia 31406
(912) 354-3911

Beds: 88
Psychiatric Staff: 18
Programs: Adult and Adolescent Psychiatric

For further information contact:

Medical Director: Henry A. Brandt, M.D.
Executive Director: J.M. Stribling

Charter By-The-Sea Hospital

2927 Demere Road
St. Simons, Georgia 31522
(912) 638-1999

Beds: 60
Psychiatric Staff: 5
Programs: Adult Psychiatric; Adult Addictive Disease
Other Programs: Recovering Nurses; Impaired Athletes; Intervention Services

For further information contact:

Medical Director: Roy F. Thagard, M.D.
Hospital Administrator: James R. Thomas

Charter Brook Hospital

3913 North Peachtree Road
Atlanta, Georgia 30341
(404) 457-8315

Beds: 65
Medical Staff: 9
Programs: Adolescent Addictive Disease

Other Programs: Comprehensive Outpatient Services

For further information contact:

Medical Director: Lonny Scarborough, M.D.
Hospital Administrator: Jonathan Farr

Charter Winds Hospital

240 Mitchell Bridge Road
Athens, Georgia 30604
(404) 546-7277

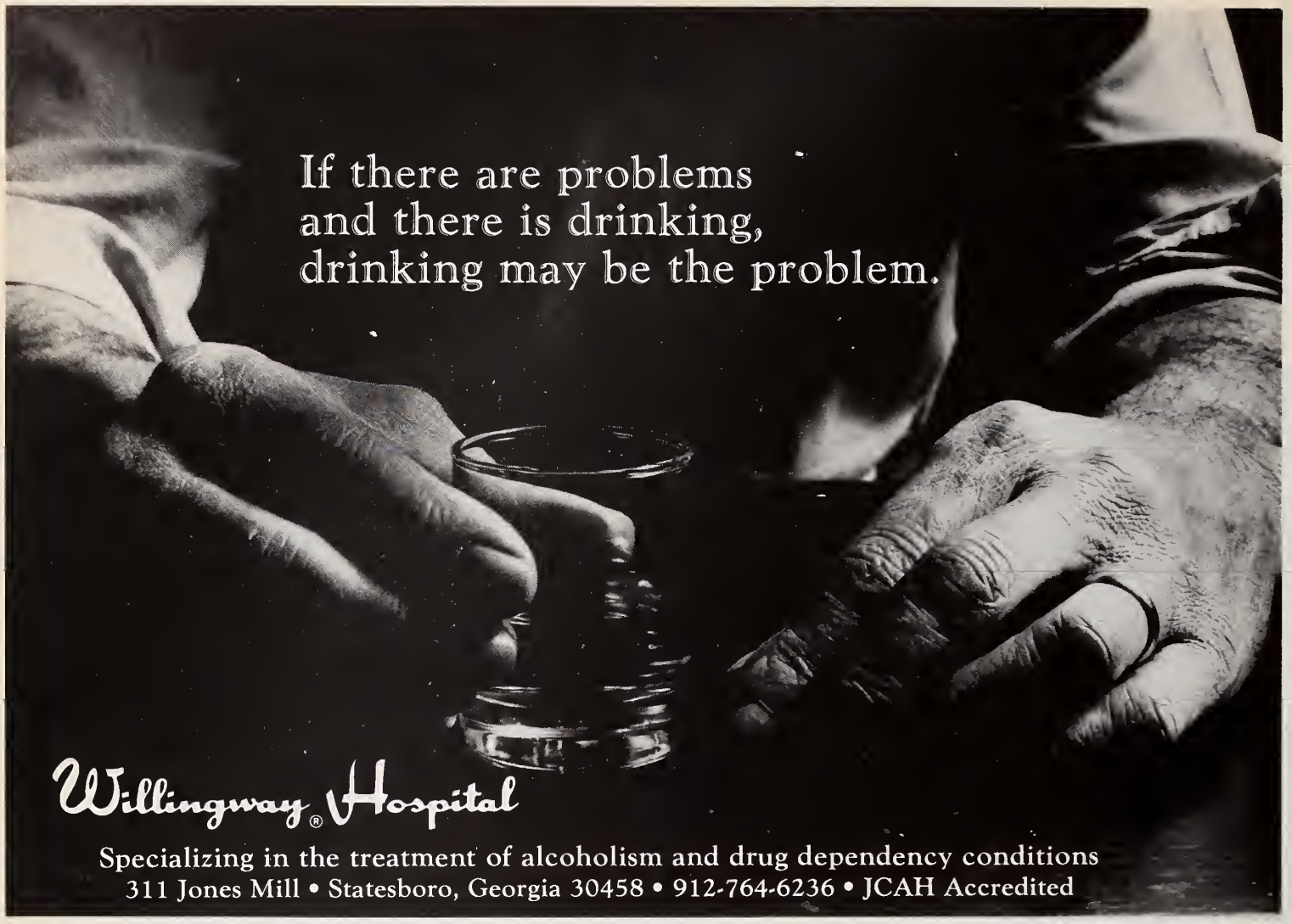
Beds: 65
Programs: Geriatric, Adult and Adolescent Psychiatric

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For further information contact:

Medical Director:
John Curtis, M.D.
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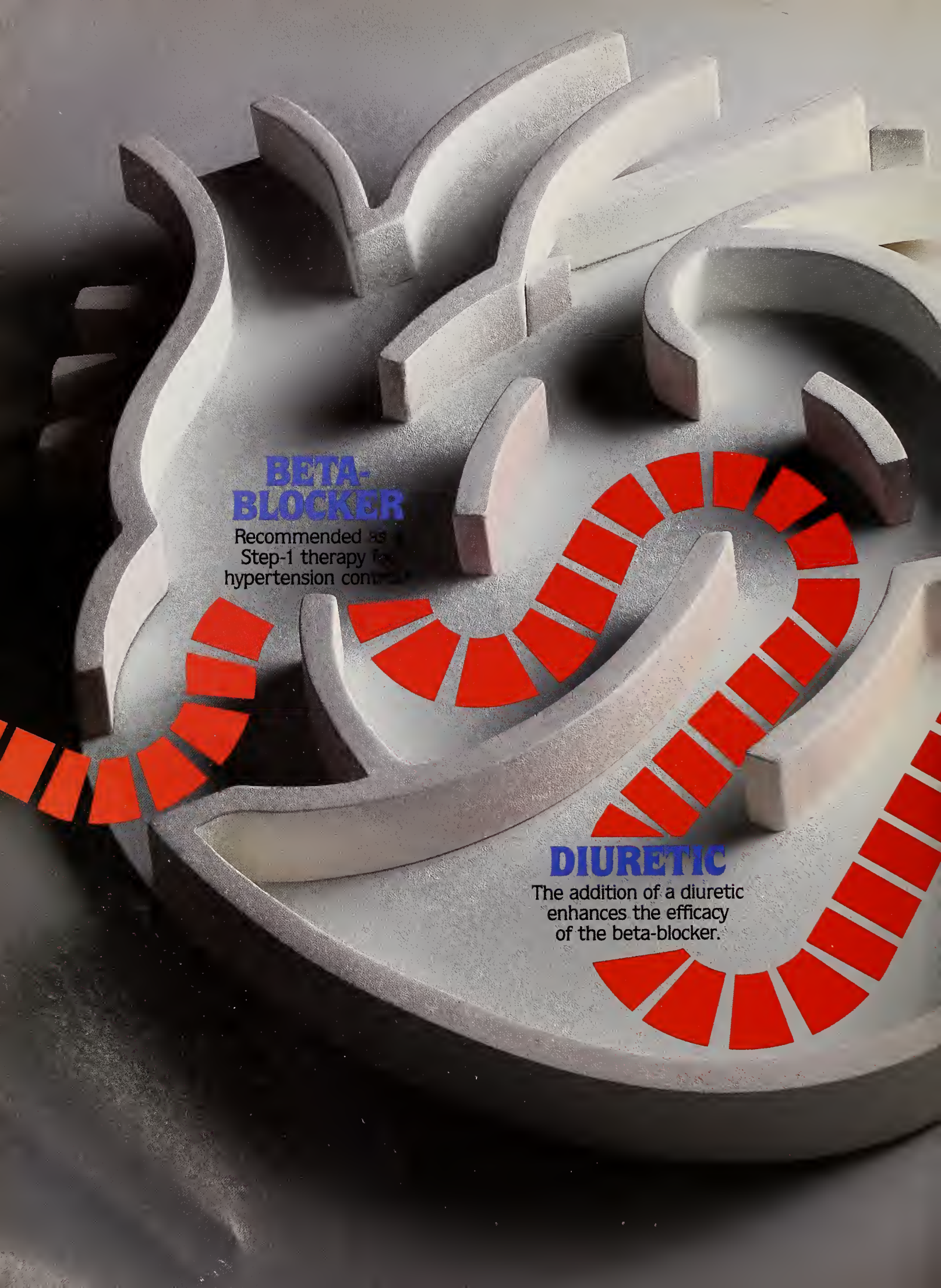
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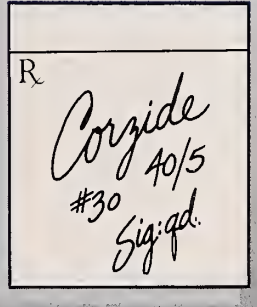
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*Joint National Committee on Detection, Evaluation and Treatment of High Blood Pressure: The 1984 report of the Joint National Committee on Detection, Evaluation and Treatment of High Blood Pressure. Arch Intern Med 144:1045-1057, 1984.

Please see brief summary of prescribing information on following page

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CONTRAINDICATIONS: Nadolol — Bronchial asthma, sinus bradycardia and greater than first degree conduction block, cardiogenic shock, and overt cardiac failure (see WARNINGS). **Bendroflumethiazide** — Anuria, and in those with previous hypersensitivity to bendroflumethiazide or other sulfonamide-derived drugs.

WARNINGS: Nadolol — Cardiac Failure — Sympathetic stimulation may be a vital component supporting circulatory function in patients with congestive heart failure, and its inhibition by beta-blockade may precipitate more severe failure. Although beta-blockers should be avoided in overt congestive heart failure, if necessary, they can be used with caution in patients with a history of failure who are well compensated, usually with digitalis and diuretics. Beta-adrenergic blocking agents do not abolish the inotropic action of digitalis on heart muscle. IN PATIENTS WITHOUT A HISTORY OF HEART FAILURE, continued use of beta-blockers can, in some cases, lead to cardiac failure. Therefore, at the first sign or symptom of heart failure, digitalize and/or give diuretics, and closely observe response, or discontinue nadolol (gradually, if possible).

Exacerbation of Ischemic Heart Disease Following Abrupt Withdrawal — Hypersensitivity to catecholamines has been observed in patients withdrawn from beta-blocker therapy; exacerbation of angina and, in some cases, myocardial infarction have occurred after *abrupt* discontinuation of such therapy. When discontinuing chronic use of nadolol, particularly in patients with ischemic heart disease, gradually reduce dosage over a 1- to 2-week period and carefully monitor the patient. Reinstitute nadolol promptly (at least temporarily) and take other measures appropriate for management of unstable angina if angina markedly worsens or acute coronary insufficiency develops. Warn patients not to interrupt or discontinue therapy without physician's advice. Because coronary artery disease is common and may be unrecognized, it may be prudent not to discontinue nadolol therapy abruptly even in patients treated only for hypertension.

Nonallergic Bronchospasm (e.g., chronic bronchitis, emphysema) — PATIENTS WITH BRONCHOSPASTIC DISEASES SHOULD IN GENERAL NOT RECEIVE BETA-BLOCKERS. Administer nadolol with caution since it may block bronchodilation produced by endogenous or exogenous catecholamine stimulation of beta$_2$ receptors. **Major Surgery** — Because beta blockade impairs the ability of the heart to respond to reflex stimuli and may increase the risks of general anesthesia and surgical procedures, resulting in protracted hypotension or low cardiac output, it has generally been suggested that such therapy should be withdrawn several days prior to surgery. Recognition of the increased sensitivity to catecholamines of patients recently withdrawn from beta-blocker therapy, however, has made this recommendation controversial. If possible, withdraw beta-blockers well before surgery takes place. In emergency surgery, inform the anesthesiologist that the patient is on beta-blocker therapy. Use of beta-receptor agonists such as isoproterenol, dopamine, dobutamine, or levarterenol can reverse the effects of nadolol. Difficulty in restarting and maintaining the heart beat has also been reported with beta-adrenergic receptor blocking agents. **Diabetes and Hypoglycemia** — Beta-adrenergic blockade may prevent the appearance of premonitory signs and symptoms (e.g., tachycardia and blood pressure changes) of acute hypoglycemia. This is especially important with labile diabetics. Beta-blockade also reduces release of insulin in response to hyperglycemia; therefore, it may be necessary to adjust dose of antidiabetic drugs. **Thyrotoxicosis** — Beta-adrenergic blockade may mask certain clinical signs (e.g., tachycardia) of hyperthyroidism. To avoid abrupt withdrawal of beta-adrenergic blockade which might precipitate a thyroid storm, carefully manage patients suspected of developing thyrotoxicosis.

Bendroflumethiazide — Use with caution in severe renal disease. In patients with renal disease, azotemia may be precipitated. With impaired renal function, effects of the drug may be cumulative. Use with caution in impaired hepatic function or progressive liver disease, since minor alterations of fluid and electrolyte balance may precipitate hepatic coma. Sensitivity reactions may occur in patients with a history of allergy or bronchial asthma. Possibility of exacerbation or activation of systemic lupus erythematosus has been reported.

PRECAUTIONS: General — Nadolol — Use with caution in patients with impaired hepatic or renal function (see DOSAGE AND ADMINISTRATION).

Bendroflumethiazide — At appropriate intervals, perform serum electrolytes determination to detect possible electrolyte imbalance warning signs of which are dryness of mouth, thirst, weakness, lethargy, drowsiness, restlessness, muscle pains or cramps, muscular fatigue, hypotension, oliguria, tachycardia, and G.I. disturbances such as nausea and vomiting. Observe patients for clinical signs of fluid or electrolyte imbalance; namely, hyponatremia, hypochloremic alkalosis, hypokalemia. Serum and urine electrolyte determinations are particularly important when the patient is vomiting excessively or receiving parenteral fluids. Drugs such as digitalis may influence serum electrolytes. Hypokalemia may develop, especially with brisk diuresis, in presence of severe cirrhosis. Interference with adequate oral electrolyte intake will also contribute to hypokalemia. Response of the heart to toxic effects of digitalis can be exaggerated with hypokalemia. Use potassium supplements such as high potassium foods to avoid or treat hypokalemia. Any chloride deficit is generally mild and usually does not require specific therapy except under extraordinary circumstances (as in liver or renal disease). Dilutional hyponatremia may occur in edematous patients in hot weather; appropriate therapy is water restriction rather than salt administration except in rare instances when the hyponatremia is life threatening. In actual salt depletion, appropriate replacement is the therapy of choice.

Hyperuricemia may occur or frank gout may be precipitated in certain thiazide-treated patients. Latent diabetes mellitus may become manifest during thiazide therapy. Antihypertensive effects of bendroflumethiazide may be enhanced in the postsympathectomy patient.

Careful reappraisal of therapy and consideration given to withholding or stopping diuretic therapy is necessary if rising nonprotein nitrogen or BUN (indicative of progressive renal impairment) occurs. Thiazides may decrease serum PBI levels without signs of thyroid disturbance. Thiazides decrease calcium excretion. Pathologic changes in parathyroid gland with hypercalcemia and hypophosphatemia have been occasionally observed with prolonged therapy. Common complications of hyperparathyroidism have not been seen.

Information for Patients — Warn patients, especially those with evidence of coronary arter insufficiency, against interruption or discontinuation of nadolol without physician's advice. Although cardiac failure rarely occurs in properly selected patients, advise patients being treated with beta-adrenergic blocking agents to consult physician at the first sign or symptom of impending failure. Advise patients of proper course if dose inadvertently missed.

Laboratory Tests — Regularly monitor serum and urine electrolyte levels (see WARNINGS, *Bendroflumethiazide,* and PRECAUTIONS, *General, Bendroflumethiazide).*

Drug Interactions — Nadolol — When administered concurrently the following drugs may interact with beta-adrenergic blocking agents: **Anesthetics, general** — exaggeration o anesthetic-induced hypotension (see WARNINGS, *Nadolol, Major Surgery).* **Antidiabetic drugs (oral agents and insulin)** — hypoglycemia or hyperglycemia; adjust antidiabetic drug dosage accordingly (see WARNINGS, *Nadolol, Diabetes and Hypoglycemia).* **Catecholamine-depleting drugs (e.g., reserpine)** — additive effect; monitor closely for evidence o hypotension and/or excessive bradycardia.

Bendroflumethiazide — When administered concurrently the following drugs may interac with thiazide diuretics: **Alcohol, barbiturates, or narcotics** — may potentiate orthostati hypotension. **Antidiabetic drugs (oral agents and insulin)** — thiazide-induced hyperglycemia may require adjustment of antidiabetic drug dosage. **Other antihypertensive drugs** — additive or potentiated effect. **Corticosteroids, ACTH** — intensified electrolyte depletion, particularly hypokalemia. **Ganglionic or peripheral adrenergic blocking drugs** — potentiated effect. **Preanesthetic and anesthetic agents** — effects may be potentiated adjust dosage accordingly. **Pressor amines (e.g., norepinephrine)** — possible decreas response but not sufficient to preclude their use. **Skeletal muscle relaxants, nondepolarizing (e.g., tubocurarine)** — possible increased response.

Drug/Laboratory Test Interactions — Discontinue thiazides before tests for parathyroi function (see PRECAUTIONS, *General, Bendroflumethiazide).*

Carcinogenesis, Mutagenesis, Impairment of Fertility — Nadolol — In 1 to 2 years ora toxicologic studies in mice, rats, and dogs, nadolol did not produce significant toxic effects. I 2-year oral carcinogenic studies in rats and mice, nadolol did not produce neoplastic, preneo plastic, or nonneoplastic pathologic lesions. **Bendroflumethiazide** — Long-term studies i animals have not been performed.

Pregnancy — Teratogenic Effects — Nadolol — Category C. In animal reproductio studies with nadolol, evidence of embryo- and fetotoxicity was found in rabbits, but not in rat or hamsters, at doses 5 to 10 times greater (on a mg/kg basis) than the maximum indicate human dose; no teratogenic potential was seen in any of these species. There are no well-con trolled studies in pregnant women; therefore, use nadolol in pregnant women only if potentia benefit justifies potential risk to the fetus. **Bendroflumethiazide** — Category C. Anima reproduction studies have not been conducted. This drug's effect on the fetus when adminis tered to a pregnant woman or its effect on reproductive capacity is not known. Bendroflu methiazide should be given to a pregnant woman only if clearly needed. **Nonteratogenic Effects** — Since thiazides cross the placental barrier and appear in cord blood, weigh antic pated benefit of the drug in pregnant women against possible hazards to the fetus; thes hazards include fetal or neonatal jaundice, thrombocytopenia, and possibly other reaction which have occurred in adults.

Nursing Mothers — Both nadolol and bendroflumethiazide are excreted in human milk Because of the potential for serious adverse reactions in nursing infants either discontinu nursing or discontinue therapy, taking into account the importance of CORZIDE (Nadolo Bendroflumethiazide Tablets) to the mother.

Pediatric Use — Safety and effectiveness in children have not been established.

ADVERSE REACTIONS: Nadolol — Most adverse effects have been mild and transient an have rarely required nadolol withdrawal. **Cardiovascular** — Bradycardia with heart rates o less than 60 beats per minute occurs commonly, and heart rates below 40 beats per minut and/or symptomatic bradycardia were seen in about 2 of 100 patients. Symptoms o peripheral vascular insufficiency, usually of the Raynaud type, have occurred in approx mately 2 of 100 patients. Cardiac failure, hypotension, and rhythm/conduction disturbance have each occurred in about 1 of 100 patients. Single instances of first degree and thir degree heart block have been reported; intensification of AV block is a known effect of beta blockers (see also CONTRAINDICATIONS, WARNINGS, and PRECAUTIONS). **Central Nervous System** — Dizziness or fatigue reported in approximately 2 of 100 patients; paresthesias, sedation, and change in behavior reported in approximately 6 of 1000 patients. **Respiratory** — Bronchospasm reported in approximately 1 of 1000 patients (see CONTRAINDICATIONS and WARNINGS). **Gastrointestinal** — Nausea, diarrhea, abdomina discomfort, constipation, vomiting, indigestion, anorexia, bloating, and flatulence eac reported in 1 to 5 of 1000 patients. **Miscellaneous** — Each of the following reported in 1 to of 1000 patients: rash; pruritus; headache; dry mouth, eyes, or skin; impotence or decrease libido; facial swelling; weight gain; slurred speech; cough; nasal stuffiness; sweating; tinnitus blurred vision. Although relationship to drug usage is not clear, sleep disturbances have bee reported. The oculomucocutaneous syndrome associated with practolol has not bee reported with nadolol. The following adverse reactions may also occur: **Central Nervous System** — reversible mental depression progressing to catatonia; visual disturbances hallucinations; an acute reversible syndrome characterized by disorientation for time an place, short-term memory loss; emotional lability with slightly clouded sensorium, decrease performance on neuropsychometrics. **Gastrointestinal** — mesenteric arterial thrombosis ischemic colitis. **Hematologic** — agranulocytosis; thrombocytopenic or nonthrombocyto penic purpura. **Allergic** — fever combined with aching and sore throat; laryngospasm respiratory distress. **Miscellaneous** — reversible alopecia; Peyronie's disease erythematous rash; arterial insufficiency.

Bendroflumethiazide — Gastrointestinal System — anorexia, gastric irritation, nausea vomiting, cramping, diarrhea, constipation, jaundice (intrahepatic cholestatic jaundice), pan creatitis. **Central Nervous System** — dizziness, vertigo, paresthesia, headache, xanthop sia. **Hematologic** — leukopenia, agranulocytosis, thrombocytopenia, aplastic anemia **Dermatologic-Hypersensitivity** — purpura, photosensitivity, rash, urticaria, necrotizin angiitis (vasculitis, cutaneous vasculitis). **Cardiovascular** — orthostatic hypotension ma occur. **Other** — hyperglycemia, glycosuria, occasional metabolic acidosis in diabetics hyperuricemia, allergic glomerulonephritis, muscle spasm, weakness, restlessness. Whene ever adverse reactions are moderate or severe, thiazide dosage should be reduced or therap withdrawn.

OVERDOSAGE: Nadolol may cause excessive bradycardia, cardiac failure, hypotension, o bronchospasm if overdosed. Overdosage of thiazides may cause lethargy, which may pro gress to coma within a few hours, with minimal depression of respiration and cardiovascula function and without evidence of serum electrolyte changes or dehydration. Gastrointestina irritation and hypermotility may occur. Transitory increase in BUN and serum electrolyt changes may occur, especially in patients with renal impairment.

Treatment — Nadolol can be removed from the general circulation by hemodialysis. In deter mining duration of corrective therapy, take note of the long duration of the effect of nadolol. I addition to gastric lavage, employ the following measures, as appropriate. **Excessive Bradycardia** — Administer atropine (0.25 to 1.0 mg). If there is no response to vaga blockade, administer isoproterenol cautiously. **Cardiac Failure** — Administer a digitali glycoside and diuretic. It has been reported that glucagon may also be useful in this situation **Hypotension** — Administer vasopressors, e.g., epinephrine or levarterenol. (There is ev dence that epinephrine may be the drug of choice.) **Bronchospasm** — Administer a beta stimulating agent and/or a theophylline derivative. **Stupor or Coma** — Supportive therapy a warranted. **Gastrointestinal Effects** — Symptomatic treatment as needed. **BUN and/o Serum Electrolyte Abnormalities** — Institute supportive measures as required to maintai hydration, electrolyte balance, respiration, and cardiovascular and renal function.

DOSAGE AND ADMINISTRATION: DOSAGE MUST BE INDIVIDUALIZED. Patients wit renal failure require adjustment in dosing interval; see package insert for dosage in thes patients.

Consult package insert before prescribing CORZIDE (Nadolol-Bendroflumethiazid Tablets).

HOW SUPPLIED: Available as scored tablets containing 40 mg nadolol combined with 5 mg ben droflumethiazide and 80 mg nadolol combined with 5 mg bendroflumethiazide in bottles of 100

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505-502 Issued: March 1985

Before prescribing, see complete prescribing information in SK&F CO. literature or *PDR*. The following is a brief summary.

* **WARNING**

This drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual. If this combination represents the dosage so determined, its use may be more convenient in patient management. Treatment of hypertension and edema is not static, but must be reevaluated as conditions in each patient warrant.

Contraindications: Concomitant use with other potassium-sparing agents such as spironolactone or amiloride. Further use in anuria, progressive renal or hepatic dysfunction, hyperkalemia. Pre-existing elevated serum potassium. Hypersensitivity to either component or other sulfonamide-derived drugs.

Warnings: Do not use potassium supplements, dietary or otherwise, unless hypokalemia develops or dietary intake of potassium is markedly impaired. If supplementary potassium is needed, potassium tablets should not be used. Hyperkalemia can occur, and has been associated with cardiac irregularities. It is more likely in the severely ill, with urine volume less than one liter/day, the elderly and diabetics with suspected or confirmed renal insufficiency. Periodically, serum K^+ levels should be determined. If hyperkalemia develops, substitute a thiazide alone, restrict K^+ intake. **Associated widened QRS complex or arrhythmia requires prompt additional therapy.** Thiazides cross the placental barrier and appear in cord blood. Use in pregnancy requires weighing anticipated benefits against possible hazards, including fetal or neonatal jaundice, thrombocytopenia, other adverse reactions seen in adults. Thiazides appear and triamterene may appear in breast milk. If their use is essential, the patient should stop nursing. Adequate information on use in children is not available. Sensitivity reactions may occur in patients with or without a history of allergy or bronchial asthma. Possible exacerbation or activation of systemic lupus erythematosus has been reported with thiazide diuretics.

Precautions: The bioavailability of the hydrochlorothiazide component of 'Dyazide' is about 50% of the bioavailability of the single entity. Theoretically, a patient transferred from the single entities of Dyrenium (triamterene, SK&F CO.) and hydrochlorothiazide may show an increase in blood pressure or fluid retention. Similarly, it is also possible that the lesser hydrochlorothiazide bioavailability could lead to increased serum potassium levels. However, extensive clinical experience with 'Dyazide' suggests that these conditions have not been commonly observed in clinical practice. Do periodic serum electrolyte determinations (particularly important in patients vomiting excessively or receiving parenteral fluids, and during concurrent use with amphotericin B or corticosteroids or corticotropin [ACTH]). Periodic BUN and serum creatinine determinations should be made, especially in the elderly, diabetics or those with suspected or confirmed renal insufficiency. Cumulative effects of the drug may develop in patients with impaired renal function. Thiazides should be used with caution in patients with impaired hepatic function. They can precipitate coma in patients with severe liver disease. Observe regularly for possible blood dyscrasias, liver damage, other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving triamterene, and leukopenia, thrombocytopenia, agranulocytosis, and aplastic and hemolytic anemia have been reported with thiazides. Thiazides may cause manifestation of latent diabetes mellitus. The effects of oral anticoagulants may be decreased when used concurrently with hydrochlorothiazide; dosage adjustments may be necessary. Clinically insignificant reductions in arterial responsiveness to norepinephrine have been reported. Thiazides have also been shown to increase the paralyzing effect of nondepolarizing muscle relaxants such as tubocurarine. Triamterene is a weak folic acid antagonist. Do periodic blood studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in post-sympathectomy patients. Use cautiously in surgical patients. Triamterene has been found in renal stones in association with the other usual calculus components. Therefore, 'Dyazide' should be used with caution in patients with histories of stone formation. A few occurrences of acute renal failure have been reported in patients on 'Dyazide' when treated with indomethacin. Therefore, caution is advised in administering nonsteroidal anti-inflammatory agents with 'Dyazide'. The following may occur: transient elevated BUN or creatinine or both, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), hyperuricemia and gout, digitalis intoxication (in hypokalemia), decreasing alkali reserve with possible metabolic acidosis. 'Dyazide' interferes with fluorescent measurement of quinidine. Hypokalemia is uncommon with 'Dyazide', but should it develop, corrective measures should be taken such as potassium supplementation or increased dietary intake of potassium-rich foods. Corrective measures should be instituted cautiously and serum potassium levels determined. Discontinue corrective measures and 'Dyazide' should laboratory values reveal elevated serum potassium. Chloride deficit may occur as well as dilutional hyponatremia. Concurrent use with chlorpropamide may increase the risk of severe hyponatremia. Serum PBI levels may decrease without signs of thyroid disturbance. Calcium excretion is decreased by thiazides. 'Dyazide' should be withdrawn before conducting tests for parathyroid function.

Thiazides may add to or potentiate the action of other antihypertensive drugs.

Diuretics reduce renal clearance of lithium and increase the risk of lithium toxicity.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis, rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting, diarrhea, constipation, other gastrointestinal disturbances; postural hypotension (may be aggravated by alcohol, barbiturates, or narcotics). Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and respiratory distress including pneumonitis and pulmonary edema, transient blurred vision, sialadenitis, and vertigo have occurred with thiazides alone. Triamterene has been found in renal stones in association with other usual calculus components. Rare incidents of acute interstitial nephritis have been reported. Impotence has been reported in a few patients on 'Dyazide', although a causal relationship has not been established.

Supplied: 'Dyazide' is supplied as a red and white capsule, in bottles of 1000 capsules; Single Unit Packages (unit-dose) of 100 (intended for institutional use only); in Patient-Pak™ unit-of-use bottles of 100.

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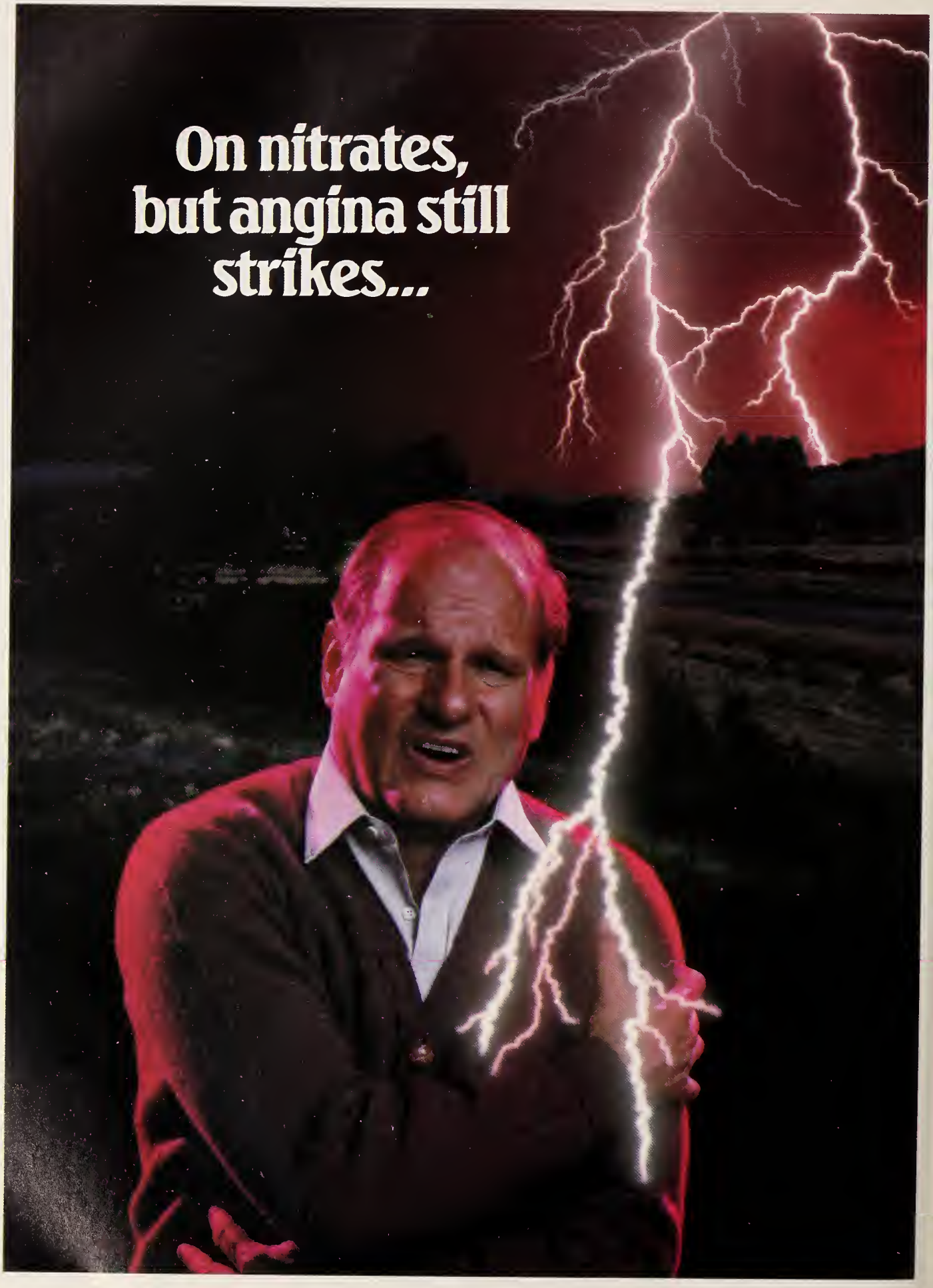
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Cardiovascular contraindications to the use of Isoptin are similar to those of beta blockers: severe left ventricular dysfunction, hypotension (systolic pressure <90 mm Hg) or cardiogenic shock, sick sinus syndrome (if no artificial pacemaker is present) and second- or third-degree AV block.

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ISOPTIN. Added antianginal protection without beta-blocker side effects.

Please see brief summary on following page.

ISOPTIN®
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Contraindications: Severe left ventricular dysfunction (see *Warnings),* hypotension (systolic pressure < 90 mm Hg) or cardiogenic shock, sick sinus syndrome (except in patients with a functioning artificial ventricular pacemaker), 2nd- or 3rd-degree AV block. **Warnings:** ISOPTIN should be avoided in patients with severe left ventricular dysfunction (e.g., ejection fraction < 30% or moderate to severe symptoms of cardiac failure) and in patients with any degree of ventricular dysfunction if they are receiving a beta blocker. (See *Precautions.)* Patients with milder ventricular dysfunction should, if possible, be controlled with optimum doses of digitalis and/or diuretics before ISOPTIN is used. (Note interactions with digoxin under *Precautions.*) ISOPTIN may occasionally produce hypotension (usually asymptomatic, orthostatic, mild and controlled by decrease in ISOPTIN dose). Elevations of transaminases with and without concomitant elevations in alkaline phosphatase and bilirubin have been reported. Such elevations may disappear even with continued treatment; however, four cases of hepatocellular injury by verapamil have been proven by rechallenge. Periodic monitoring of liver function is prudent during verapamil therapy. Patients with atrial flutter or fibrillation and an accessory AV pathway (e.g. W-P-W or L-G-L syndromes) may develop increased antegrade conduction across the aberrant pathway bypassing the AV node, producing a very rapid ventricular response after receiving ISOPTIN (or digitalis). Treatment is usually D.C.-cardioversion, which has been used safely and effectively after ISOPTIN. Because of verapamil's effect on AV conduction and the SA node, 1° AV block and transient bradycardia may occur. High grade block, however, has been infrequently observed. Marked 1° or progressive 2° or 3° AV block requires a dosage reduction or, rarely, discontinuation and institution of appropriate therapy depending upon the clinical situation. Patients with hypertrophic cardiomyopathy (IHSS) received verapamil in doses up to 720 mg/day. It must be appreciated that this group of patients had a serious disease with a high mortality rate and that most were refractory or intolerant to propranolol. A variety of serious adverse effects were seen in this group of patients including sinus bradycardia, 2° AV block, sinus arrest, pulmonary edema and/or severe hypotension. Most adverse effects responded well to dose reduction and only rarely was verapamil discontinued. **Precautions:** ISOPTIN should be given cautiously to patients with impaired hepatic function (in severe dysfunction use about 30% of the normal dose) or impaired renal function, and patients should be monitored for abnormal prolongation of the PR interval or other signs of excessive pharmacologic effects. Studies in a small number of patients suggest that concomitant use of ISOPTIN and beta blockers may be beneficial in patients with chronic stable angina. Combined therapy can also have adverse effects on cardiac function. Therefore, until further studies are completed, ISOPTIN should be used alone, if possible. If combined therapy is used, close surveillance of vital signs and clinical status should be carried out. Combined therapy with ISOPTIN and propranolol should usually be avoided in patients with AV conduction abnormalities and/or depressed left ventricular function. Chronic ISOPTIN treatment increases serum digoxin levels by 50% to 70% during the first week of therapy, which can result in digitalis toxicity. The digoxin dose should be reduced when ISOPTIN is given, and the patients should be carefully monitored to avoid over- or under-digitalization. ISOPTIN may have an additive effect on lowering blood pressure in patients receiving oral antihypertensive agents. Disopyramide should not be given within 48 hours before or 24 hours after ISOPTIN administration. Until further data are obtained, combined ISOPTIN and quinidine therapy in patients with hypertrophic cardiomyopathy should probably be avoided, since significant hypotension may result. Clinical experience with the concomitant use of ISOPTIN and short- and long-acting nitrates suggest beneficial interaction without undesirable drug interactions. Adequate animal carcinogenicity studies have not been performed. One study in rats did not suggest a tumorigenic potential, and verapamil was not mutagenic in the Ames test. *Pregnancy Category C:* There are no adequate and well-controlled studies in pregnant women. This drug should be used during pregnancy, labor and delivery only if clearly needed. It is not known whether verapamil is excreted in breast milk; therefore, nursing should be discontinued during ISOPTIN use. **Adverse Reactions:** Hypotension (2.9%), peripheral edema (1.7%), AV block: 3rd degree (0.8%), bradycardia: HR < 50/min (1.1%), CHF or pulmonary edema (0.9%), dizziness (3.6%), headache (1.8%), fatigue (1.1%), constipation (6.3%), nausea (1.6%), elevations of liver enzymes have been reported. (See *Warnings.*) The following reactions, reported in less than 0.5%, occurred under circumstances where a causal relationship is not certain: ecchymosis, bruising, gynecomastia, psychotic symptoms, confusion, paresthesia, insomnia, somnolence, equilibrium disorder, blurred vision, syncope, muscle cramp, shakiness, claudication, hair loss, macules, spotty menstruation. **How Supplied:** ISOPTIN (verapamil HCl) is supplied in round, scored, film-coated tablets containing either 80 mg or 120 mg of verapamil hydrochloride and embossed with "ISOPTIN 80" or "ISOPTIN 120" on one side and with "KNOLL" on the reverse side. Revised August, 1984. 2385

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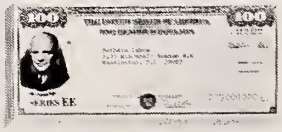


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Barnes, William S., Bibb — ACT (N-2) — ORS
671 Hemlock St., Macon 31201

Bolton, Richard L., Peachbelt — ACT — ORS
102 Pleasant Hill Villa Apts., Warner Robins 31093

Carroll, James E., Richmond — ACT — N
Pediatric Neurology, MCG, CK 297, Augusta 30912

Chaudhary, Tesneem K., Richmond — ACT — PD/AL
1021-15th St., Ste. 11, Augusta 30901

Croll, Stephanie D., Georgia Medical Society — ACT (N-2) — OPH
5354 Reynolds St., Ste. 401, Savannah 31405

Fannin, William R., Jr., Bibb — ACT — CHP/P
596 Arlington Place, Macon 31201

Feringa, Earl R., Richmond — ACT — N
VA Medical Center, Neurology (127), Augusta 30910

Gordon, Michael C., Cobb — ACT — FP
3188 Atlanta St., SE, Smyrna 30080

Gray, Arthur R., Jr., Bibb — ACT — (N-2) — AN
3795 Bonita Place, Macon 31204

Hannay, Keith E., Floyd-Polk-Chattooga — ACT (N-2) — FP
P. O. Box 409, Summerville 30747

Jaffe, Jon E., Bibb — ACT — PD/EM
777 Hemlock St., Macon 31201

Katz, Ernest, III, Gwinnett-Forsyth — ACT (N-2) — IM/GE
401 Regency Woods Dr., NE, Atlanta 30319

Levi, James S., Bibb — ACT — PD
1550 College St., Macon 31201

Maley, Michael L. (Mr.), Bibb — Student
1339 Stadium Dr., Apt. 103-C, Macon 31201

McLaurin, Eugene B., Georgia Medical Society — ACT — OPH
728 E. 67th St., Savannah 31405

Meyer, Charles A., Jr., Richmond — ACT — P/FOP
Psychiatry Service (116-AU), VA Medical Center, Augusta 30910

Mynatt, Cecil F., Peachbelt — ACT — P
1031 N. Houston Rd., Warner Robins 31093

Norris, Jeanette E. (Ms.), Bibb — Student
2148 Vineville Ave., Apt. 3, Macon 31207

Norvell, Mark K., Glynn — ACT (N-2) — OBG
3226 Hampton Ave., Brunswick 31520

Owen, Robert L., Glynn — ACT — AN
3215 Shrine Rd., Brunswick 31520

Panico, Richard A., Crawford W. Long — ACT (N-2) — P
565 Research Dr., Athens 30605

Pischke, Frank J., Bibb — ACT — OTO
420 Charter Blvd., Ste. 201, Macon 31210

Rivner, Michael H., Richmond — ACT — N
EMB Laboratory, MCG, Augusta 30912

Singh, Harinderjit, Richmond — ACT — OPH
2100 Central Ave., #G, Augusta 30904

Spiegel, John, Bibb — ACT (N-2) — N
829 First St., Macon 31201

Smith, Ronnie R., Southeast Georgia — ACT — IM/CDS
P. O. Box 1367, Vidalia 30474

Taylor, Richard L., Troup — ACT — PD
303 Smith St., LaGrange 30240

Warren, David B. (Mr.), Bibb — Student
1363 Stadium Dr., Apt. 304-D, Macon 31201

Watson, Jane E. (Ms.), Bibb — Student
1884 Windship St., Apt. 5, Macon 31201

Williams, Timothy C., Dougherty — ACT (N-2) — AN
408 Fourth Ave., Albany 31705

PERSONALS

First District

Statesboro physician, **Albert M. Deal, M.D.,** was honored by a Resolution from the Composite State Board of Medical Examiners recognizing him for his 33 years of service. The certificate stated that he "has become affectionately known as 'elder statesman' of the Board by its members because of the depth of knowledge he has acquired from his years of experience."

Stephen R. White, M.D., of Statesboro, was presented the Pacesetter Award for excellence in public education programs for youth and adults on behalf of the Bulloch County Unit of the American Cancer Society.

Second District

Frank H. Parrott, M.D., of Albany, an internist specializing in pulmonary diseases, was recently named to serve on the American Lung Association of Georgia's Board of Directors. Dr. Parrott will serve a 3-year term representing the 29-county Southwest Georgia area, as a member of the adult lung disease committee.

Fourth District

LaMar S. McGinnis, Jr., M.D., a surgeon from Decatur, was elected president of the MCG Foundation Inc. Dr. McGinnis has served as president of the Georgia Surgical Society (1982-83) and is president-elect of the Georgia Chapter of the American College of Surgeons. He serves on the staff of several Atlanta area hospitals and is a clinical associate professor of surgery at the Emory University School of Medicine. He has been president of the MCG School of Medicine Alumni Association (1982-83) and received the Physician's Physician Award in the Atlanta area in 1982.

Fifth District

Roswell orthopedic surgeon, **Russell L. Sabrin, M.D.,** was named Chairman of the Department of Surgery at the North Fulton Medical Center.

Sanford J. Matthews, M.D., a pediatrician, was named president of the Clinical Society of Piedmont Hospital, the presiding body over the hospital's 543-member staff. **Jeffrey T. Nugent, M.D.,** an orthopedic surgeon, was named vice president, and **Donald E. Hubbard,** an obstetrician/gynecologist, was named secretary.

Sixth District

Vincent Peng, M.D., a dermatologist, has opened a new office in Riverdale.

Evan Molyneaux, M.D., a family practitioner, and **Rao Lingam, M.D.,** a specialist in emergency medicine, were honored for community service by the Social Services Department of West Georgia Medical Center with the first presentation of the Ruth B. Duncan Humanitarian Awards.

Seventh District

Daniel H. Cohen, M.D., was named Chairman of the Department of Medicine at the North Fulton Medical Center. Dr. Cohen is a specialist in internal medicine and nephrology.

Eighth District

Allen F. Delevett, M.D., of Brunswick, was honored at a reception upon his retirement. Dr. Delevett received his medical degree from Johns Hopkins University. He practiced for 27 years in Bridgeport, CT. From there, he served in a Veteran's Administration Hospital in Temple, TX. Later he taught in the Medical School at Washington University, St. Louis, MO. In 1977, he moved to St. Simons where he has practiced up until his retirement. He has been affiliated with the Glynn-Brunswick Memorial Hospital and the Medical Society of Glynn County. He has served on the Board of Directors of Hospice and United Methodist Church of Brunswick.

After 25 years of commuting from Atlanta to Villa Rica, **Jack A. Thompson, M.D.,** a general surgeon, has established a full-time general surgery practice in Villa Rica.

Ninth District

Lilburn physician, **Corinne F. Quinn, M.D.,** has been elected a Fellow in the American College of Cardiology.

Tenth District

Joseph P. Bailey, Jr., M.D., was honored with a Charbonnier dinner where he was named the fifth Charbonnier Professor at MCG. The dinner was given by the MCG Foundation. Dr. Bailey has served MCG for 23 years, beginning as Instructor in the Department of Medicine in 1961. He was appointed Chief of the Section of Rheumatology in 1967, Professor in the Department of Medicine in 1969, and Associate Dean for Clinical Sciences in 1972.

J. William Thurmond, III, M.D., has opened an office in Sylvania for the general practice of medicine.

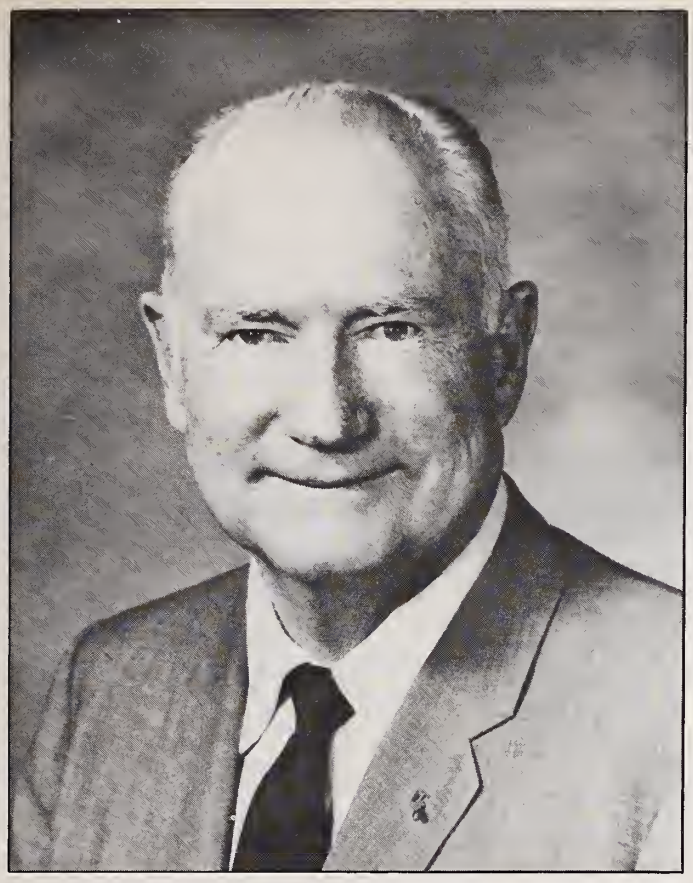
SOCIETIES

John M. Westenberger, aged 44, has been named Executive Director of the **Medical Association of Atlanta,** effective June 1. He comes to MAA with 14 years experience in medical association management, having served as Executive Director of both the Memphis and Shelby County Medical Society and Nashville-Davidson County Medical Society in Tennessee. John is past president of the Memphis Society of Association Executives and the first Memphian elected to the Board of Directors of the Tennessee Society of Association Executives. He is a graduate of Leadership Nashville and a member of the National Alumni Board of Directors of his alma mater, Birmingham-Southern College.

DEATHS

Wadley R. Glenn

Wadley R. Glenn, M.D., who has served as Medical Director for the Crawford W. Long Memorial Hospital since 1946, died April 2. He was 80 years old. Dr. James T. Laney, President of Emory University, said, "Dr. Wadley Glenn was a trustee of Emory University for 40 years and a driving force behind the building of the University's great Crawford W. Long Hospital. Nurtured by Dr. Glenn and his family, that facility has become one of the resources of our city and plays an increasingly important role in the ongoing clinical and research programs in health sciences at Emory. Dr. Glenn embodied for Crawford W. Long Hospital the ideal of the caring physician. He will be sorely missed."

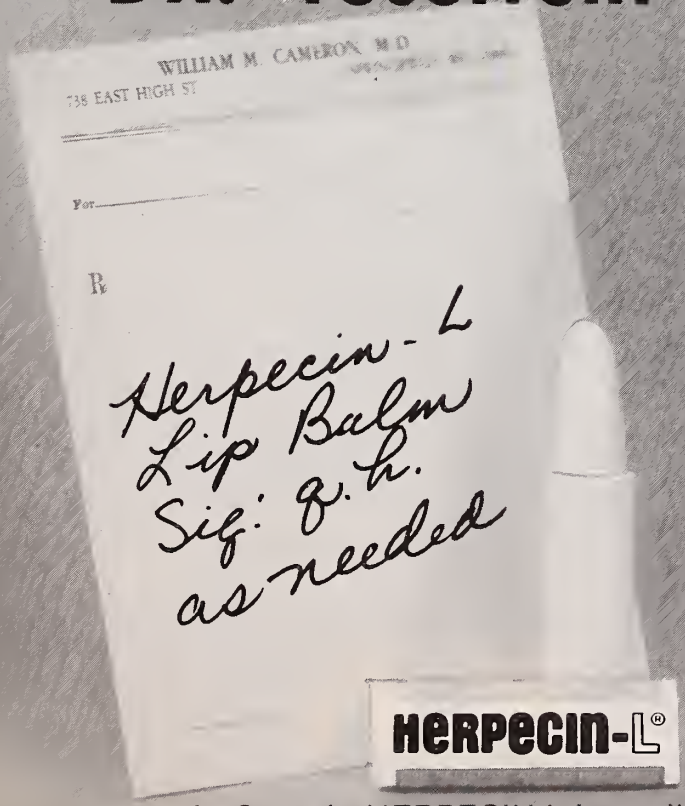


Wadley R. Glenn, M.D.

Dr. Glenn received his B.S. and M.E. degrees from the Georgia School of Technology and, in 1933, graduated with honors from Emory University School of Medicine. On completion of an internship and residency in surgery at Grady Memorial Hospital, he joined the surgery faculty of Emory. The following year, he also joined the staff of Crawford W. Long, then a completely private hospital. His leadership brought many new services into the hospital, ranging from the area's first blood bank after World War II through the establishment of an unusual nuclear medicine unit in the early 1960s and the development of the widely recognized Carlyle Fraser Heart Center for the diagnosis and treatment of coronary disease. He held many other related positions. Among them, he was a member of the Emory University Board of Trustees (1946), Director of the Tumor Clinic at Crawford W. Long (1948), Clinical Assistant Professor of Surgery at Emory (1952), and Assistant Chief of Surgery, Grady Memorial Hospital (1952).

In 1974, he was appointed Professor Emeritus of Surgery at Emory and continued his active role as Medical Director for Crawford W. Long. In 1978, he and his brother, Wilbur Glenn, received the Woodruff Award of Dedication for best exemplifying the spirit of the late Robert W. Woodruff. In January, 1985, the Executive Committee of the Board of Trustees of Emory University named the operating room suite at Crawford W. Long the Wadley R. Glenn Operating Pavilion.

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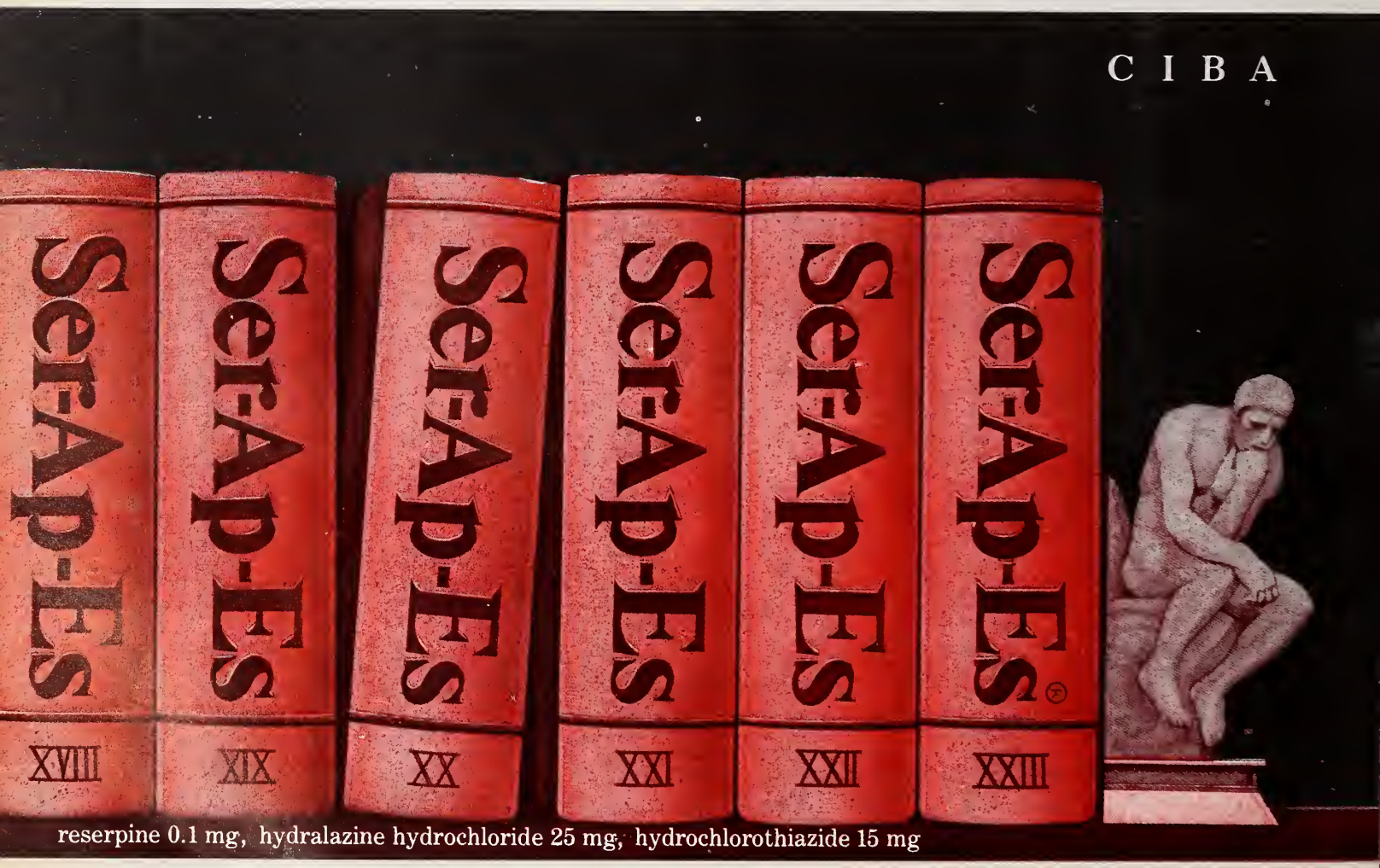
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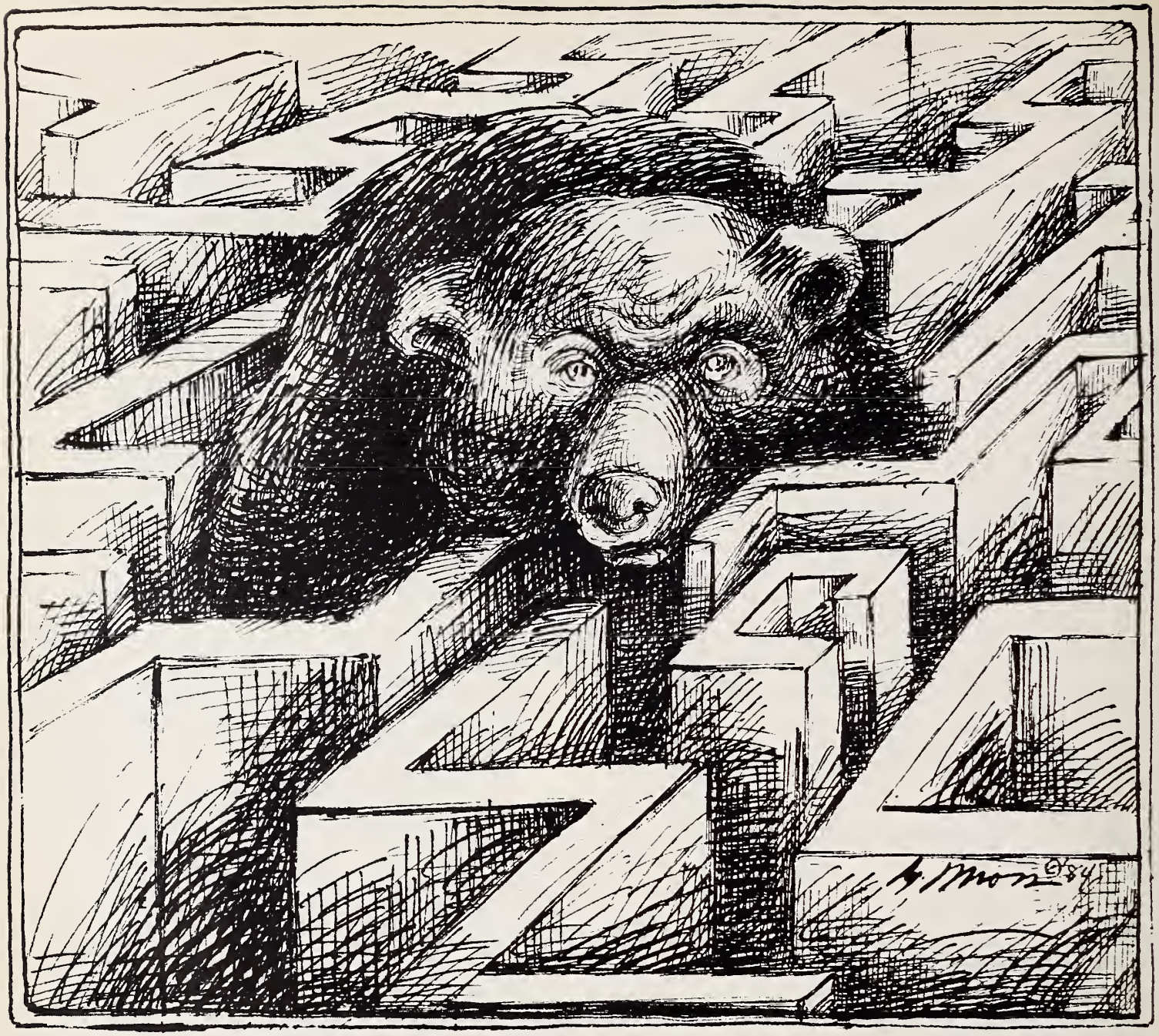
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JOURNAL of the medical association of georgia

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> Soter NA, Wasserman SI, Austen KF. Cold urticaria release into circulation of histamine and eosinophil chemotactic factor of anaphylaxis during cold challenge. N Engl J Med 1976;294:687-90.

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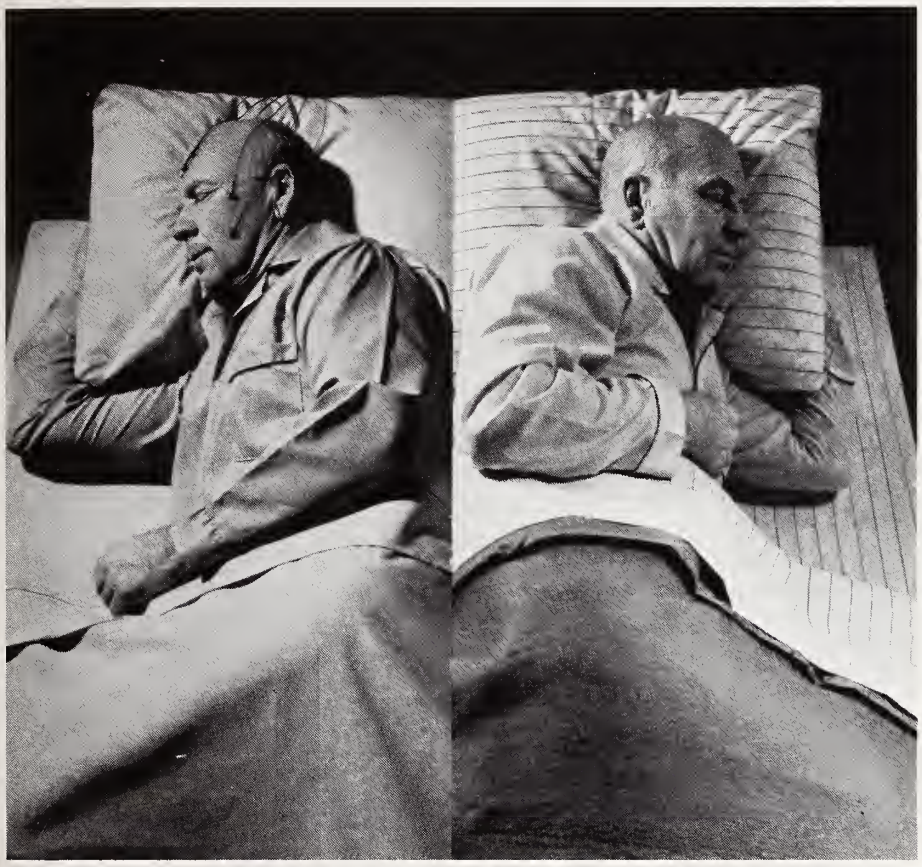
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References: **1.** Kales J *et al*: *Clin Pharmacol Ther* 12.691-697, Jul-Aug 1971. **2.** Kales A *et al*: *Clin Pharmacol Ther* 18:356-363, Sep 1975. **3.** Kales A *et al*: *Clin Pharmacol Ther* 19:576-583, May 1976. **4.** Kales A *et al*: *Clin Pharmacol Ther* 32:781-788, Dec 1982. **5.** Frost JD Jr, DeLucchi MR: *J Am Genatr Soc* 27.541-546, Dec 1979. **6.** Kales A, Kales JD: *J Clin Pharmacol* 3.140-150, Apr 1983. **7.** Greenblatt DJ, Allen MD, Shader RI: *Clin Pharmacol Ther* 21:355-361, Mar 1977. **8.** Zimmerman AM: *Curr Ther Res* 13:18-22, Jan 1971. **9.** Amrein R *et al*: *Drugs Exp Clin Res* 9(1) 85-99, 1983. **10.** Monti JM. *Methods Find Exp Clin Pharmacol* 3:303-326, May 1981. **11.** Greenblatt DJ *et al*: *Sleep* 5(Suppl 1):S18-S27, 1982. **12.** Kales A *et al*: *Pharmacology* 26.121-137, 1983.

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Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. An additive effect may occur if alcohol is consumed the day following use for nighttime sedation. This potential may exist for several days following discontinuation. Caution against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Potential impairment of performance of such activities may occur the day following ingestion. Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, abrupt discontinuation should be avoided with gradual tapering of dosage for those patients on medication for a prolonged period of time. Use caution in administering to addiction-prone individuals or those who might increase dosage.

Precautions: In elderly and debilitated patients, it is recommended that the dosage be limited to 15 mg to reduce risk of oversedation, dizziness, confusion and/or ataxia. Consider potential additive effects with other hypnotics or CNS depressants. Employ usual precautions in severely depressed patients, or in those with latent depression or suicidal tendencies, or in those with impaired renal or hepatic function.

Adverse Reactions: Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported: headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of leukopenia, granulocytopenia, sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations, and elevated SGOT, SGPT, total and direct bilirubins, and alkaline phosphatase; and paradoxical reactions, *e.g.*, excitement, stimulation and hyperactivity.

Dosage: Individualize for maximum beneficial effect. *Adults:* 30 mg usual dosage; 15 mg may suffice in some patients. *Elderly or debilitated patients:* 15 mg recommended initially until response is determined.

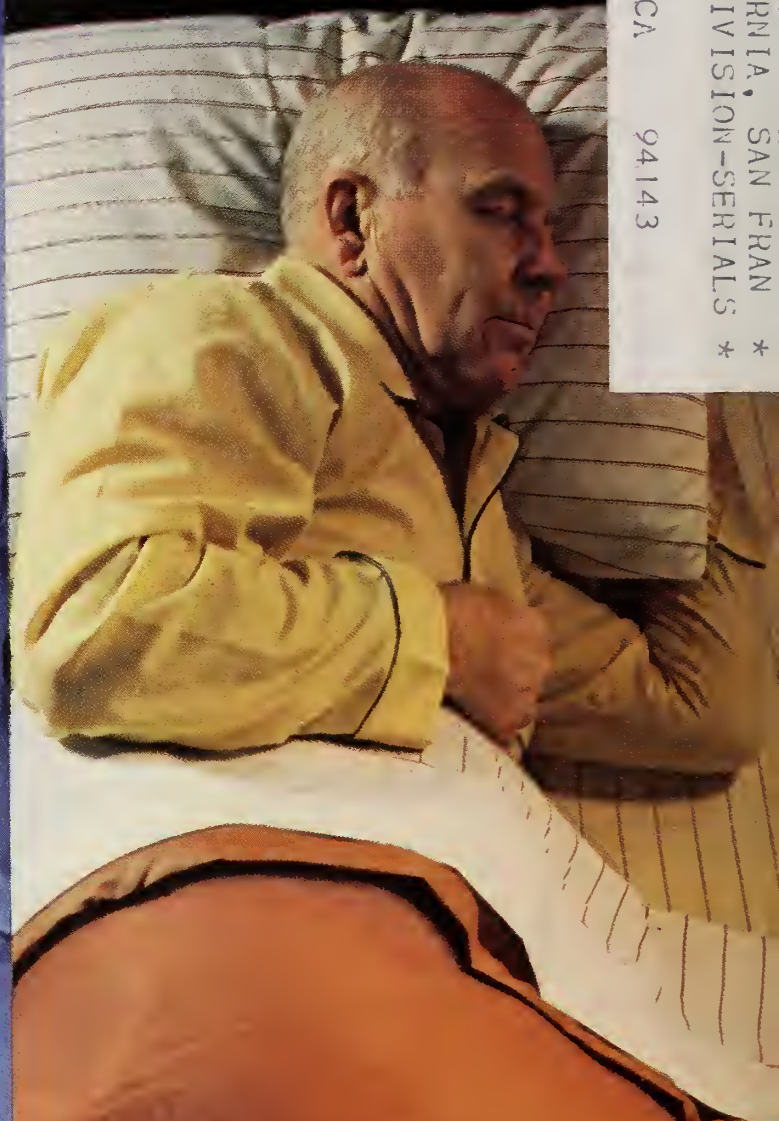
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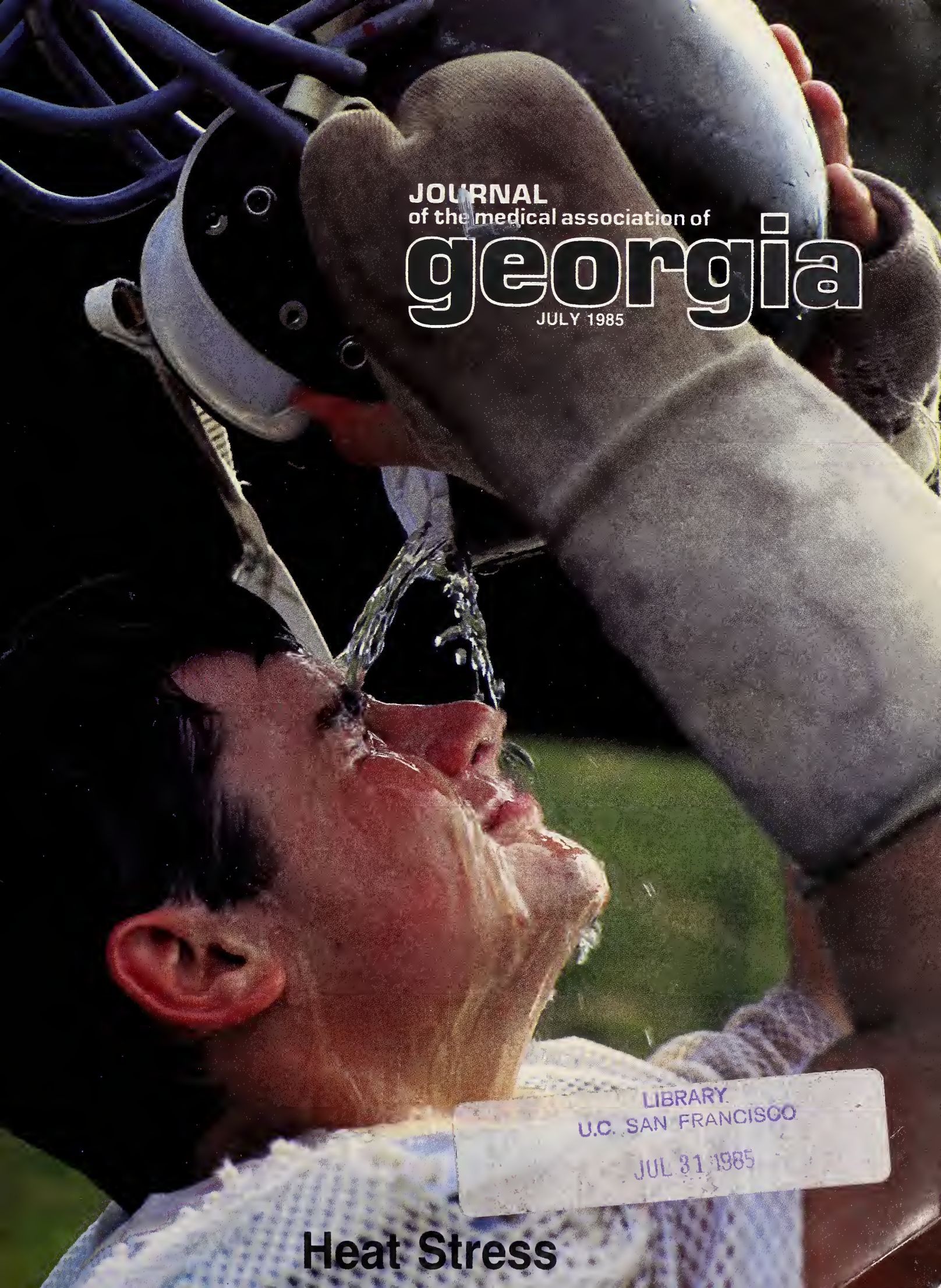
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INDICATIONS AND USAGE: SORBITRATE (isosorbide dinitrate) is indicated for the treatment and prevention of angina pectoris. All dosage forms of isosorbide dinitrate may be used prophylactically to decrease frequency and severity of anginal attacks and can be expected to decrease the need for sublingual nitroglycerin.

The sublingual and chewable forms of the drug are indicated for acute prophylaxis of angina pectoris when taken a few minutes before situations likely to provoke anginal attacks. Because of a slower onset of effect, the oral forms of isosorbide dinitrate are not indicated for acute prophylaxis.

CONTRAINDICATIONS: SORBITRATE is contraindicated in patients who have shown purported hypersensitivity or idiosyncrasy to it or other nitrates or nitrites. Epinephrine and related compounds are ineffective in reversing the severe hypotensive events associated with overdose and are contraindicated in this situation.

WARNINGS: The benefits of SORBITRATE during the early days of an acute myocardial infarction have not been established. If one elects to use organic nitrates in early infarction, hemodynamic monitoring and frequent clinical assessment should be used because of the potential deleterious effects of hypotension.

PRECAUTIONS: General: Severe hypotensive response, particularly with upright posture, may occur with even small doses of SORBITRATE. The drug should therefore be used with caution in subjects who may have blood volume depletion from diuretic therapy or in subjects who have low systolic blood pressure (eg, below 90 mmHg). Paradoxical bradycardia and increased angina pectoris may accompany nitrate-induced hypotension. Nitrate therapy may aggravate the angina caused by hypertrophic cardiomyopathy.

Marked symptomatic, orthostatic hypotension has been reported when calcium channel blockers and organic nitrates were used in combination. Dose adjustment of either class of agents may be necessary.

Tolerance to this drug and cross-tolerance to other nitrates and nitrites may occur. Tolerance to the vascular and antianginal effects of isosorbide dinitrate or nitroglycerin has been demonstrated in clinical trials, experience through occupational exposure, and in isolated tissue experiments in the laboratory. The importance of tolerance to the appropriate use of isosorbide dinitrate in the management of patients with angina pectoris has not been determined. However, one clinical trial using treadmill exercise tolerance (as an end point) found an 8-hour duration of action of oral isosorbide dinitrate following the first dose (after a 2-week placebo washout) and only a 2-hour duration of effect of the same dose after 1 week of repetitive dosing at conventional dosing intervals. On the other hand, several trials have been able to differentiate isosorbide dinitrate from placebo after 4 weeks of therapy and, in open trials, an effect seems detectable for as long as several months.

Tolerance clearly occurs in industrial workers continuously exposed to nitroglycerin. Moreover, physical dependence also occurs since chest pain, acute myocardial infarction, and even sudden death have occurred during temporary withdrawal of nitroglycerin from the workers. In clinical trials in angina patients, there are reports of anginal attacks being more easily provoked and of rebound in the hemodynamic effects soon after nitrate withdrawal. The relative importance of these observations to the routine, clinical use of isosorbide dinitrate is not known. However, it seems prudent to gradually withdraw patients from isosorbide dinitrate when the therapy is being terminated, rather than stopping the drug abruptly.

Information for Patients: Headache may occur during initial therapy with SORBITRATE. Headache is usually relieved by the use of standard headache remedies or by lowering the dose and tends to disappear after the first week or two of use.

Drug Interactions: Alcohol may enhance any marked sensitivity to the hypotensive effect of nitrates.

Isosorbide dinitrate acts directly on vascular smooth muscle; therefore, any other agent that depends on vascular smooth muscle as the final common path can be expected to have decreased or increased effect depending on the agent.

Carcinogenesis, Mutagenesis, Impairment of Fertility: No long-term studies in animals have been performed to evaluate the carcinogenic potential of this drug. A modified two-litter reproduction study in rats fed isosorbide dinitrate at 25 or 100 mg/kg/day did not reveal any effects on fertility or gestation or any remarkable gross pathology in any parent or offspring fed isosorbide dinitrate as compared with rats fed a basal-controlled diet.

Pregnancy Category C: Isosorbide dinitrate has been shown to cause a dose-related increase in embryotoxicity (increase in mummified pups) in rabbits at oral doses 35 and 150 times the maximum recommended human daily dose. There are no adequate and well-controlled studies in pregnant women. SORBITRATE should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers: It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when SORBITRATE is administered to a nursing woman.

Pediatric Use: The safety and effectiveness of SORBITRATE in children has not been established.

ADVERSE REACTIONS: Adverse reactions, particularly headache and hypotension, are dose-related. In clinical trials at various doses, the following have been observed:

Headache is the most common (reported incidence varies widely, apparently being dose-related, with an average occurrence of about 25%) adverse reaction and may be severe and persistent. Cutaneous vasodilation with flushing may occur. Transient episodes of dizziness and weakness, as well as other signs of cerebral ischemia associated with postural hypotension, may occasionally develop (the incidence of reported symptomatic hypotension ranges from 2% to 36%). An occasional individual will exhibit marked sensitivity to the hypotensive effects of nitrates and severe responses (nausea, vomiting, weakness, restlessness, pallor, perspiration, and collapse) may occur even with the usual therapeutic dose. Drug rash and/or exfoliative dermatitis may occasionally occur. Nausea and vomiting appear to be uncommon. Case reports of clinically significant methemoglobinemia are rare at conventional doses of organic nitrates. The formation of methemoglobin is dose-related and, in the case of genetic abnormalities of hemoglobin that favor methemoglobin formation, even conventional doses of organic nitrate could produce harmful concentrations of methemoglobin.

DOSAGE AND ADMINISTRATION: For the treatment of angina pectoris, the usual starting dose for sublingual SORBITRATE is 2.5 to 5 mg; for chewable tablets, 5 mg; for oral (swallowed) tablets, 5 to 20 mg; and for controlled-release forms, 40 mg.

SORBITRATE should be titrated upward until angina is relieved or side effects limit the dose. In ambulatory patients, the magnitude of the incremental dose increase should be guided by measurements of standing blood pressure.

The initial dosage of sublingual or chewable SORBITRATE for prophylactic therapy in angina pectoris patients is generally 5 or 10 mg every 2 to 3 hours. Adequate controlled clinical studies demonstrating the effectiveness of chronic maintenance therapy with these dosage forms have not been reported.

SORBITRATE in oral doses of 10 to 40 mg given every 6 hours or in oral controlled-release doses of 40 to 80 mg given every 8 to 12 hours is generally recommended. The extent to which development of tolerance should modify the dosage program has not been defined. *The oral controlled-release forms of isosorbide dinitrate should not be chewed.*

DOSAGE FORMS AVAILABLE: Sublingual Tablets (2.5, 5, 10 mg); Chewable Tablets (5, 10 mg); Oral Tablets (5, 10, 20, 30, 40 mg); Sustained Action Tablets (40 mg).

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of the medical association of georgia

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Special thanks to the coach and football team of The Westminster Schools, Atlanta, for their cooperation with our photographic efforts for the cover and the special article on p. 478. Photos by Chuck Rogers of Atlanta.

Incidental Intelligence . . .

Supreme Court Agrees To Rule On Abortion . . . Again

The abortion issue will take on new prominence next fall as the Supreme Court justices review two controversial state abortion laws.

The two state laws — in Pennsylvania and Illinois — already have been declared unconstitutional by federal appeals courts. The laws would have given the state governments a major role in the abortion decisionmaking process by specifying how a doctor must perform some abortions and what he must tell his patients.

Court approval of the laws could give abortion opponents a green light to pass more restrictive state laws.

On the other hand, rejection of the laws would further protect a woman's right to abortion and reduce the risk of later tampering by a Reagan-appointed member of the court.

The court's decision to review the laws puzzles both advocates and opponents of abortion. It is uncertain, they say, whether the court will try to expand or contract the power of states to regulate abortion.

The two cases to be argued in the next session are:

- an Illinois law that would have made it a crime for a doctor to cause the death of a viable fetus by performing an abortion. It also would have required that doctors inform their patients that some contraceptives — such as IUDs and morning-after pills — are "abortifacients" that cause fetal death by preventing the fertilized egg to reach the womb.
- a Pennsylvania law would have required that a doctor give a detailed description of the risks of abortion. In addition, it would have imposed a 24-hour waiting period and required that all second trimester abortions be performed in a hospital.

Similar state provisions were overturned two years ago in the Supreme Court's 6-to-3 decision in *City of Akron V. Akron Center for Reproductive Health*. This decision, which rejected the state's role in determining where, and how, an abortion is performed, was assumed to have firmly established a woman's right to the procedure.

Heart Transplants Under Consideration For Medicare

Heart transplantation is being rapidly transformed from an experimental to a therapeutic procedure, federal officials announced at a Washington recent press conference.

They stopped short of guaranteeing Medicare coverage for the procedure, however, saying it needed further study over the next several months.

The government's new review of heart transplantation was prompted by the optimistic results of a long-awaited study by the Battelle Research Center.

The $1.6 million study analyzed the cost and outcome of 441 heart transplant cases performed between 1975 and 1983 at six national transplant centers.

If the government decides to reimburse under Medicare, probably only 85 to 100 of the 42.7 million Americans with cardiovascular disease will be eligible for surgery each year. It is likely that selection criteria will be very stringent, limiting transplants to patients under age 55 and free of other medical problems. Because Medicare is restricted to persons over age 65 or disabled more than two years, few of these beneficiaries will qualify.

Thus, the price tag may be relatively small. Battelle researchers estimated that the total cost of covering heart transplantation would range from $2 million to $3.5 million a year, much less than the $2 billion a year spent on the controversial End Stage Renal Disease Program (ESRD). Each heart transplant recipient would cost roughly $37,000, compared to the $30,000 spent on each of the 70,000 ESRD dialysis patients each year, but with only a few hundred patients qualifying, the total cost should be low.

The Battelle study found that roughly 80% recipients of heart transplants are alive after 1 year and 50% are alive after 5 years. One-quarter will survive longer than 10 years. An estimated 32% of transplant recipients have gone back to work and 67% consider themselves "in good health." The dramatic increase in survival rates for heart transplant recipients can be traced back to the introduction of cyclosporine in 1980.

Complications, when they appear, are generally linked to immunosuppressive therapy. Five complications are most common: osteoporosis (18.2%), diabetes (14.9%), vision disorders (14.3%), back or spine disorders (8.8%), and cancer (6.1%).

Selection criteria for patients were strict, thus excluding aged or sick patients who would have lowered survival statistics, the study found. The typical recipient was only 42 years old. The six centers accept only persons who are free of active infection, multiple organ dysfunction, illness or rehabilitative difficulties, pulmonary problems, or diabetes.

Funding is a major source of concern for heart transplant recipients. Although the majority of private insurers and 12 states pay for transplant procedures, roughly 70% of recipients paid for pre-transplant and post-transplant expenses out of their own pockets.

In many cases, recipients depended upon the transplant center or direct donations to help fund their procedure.

"It is still a technique to be applied only when a specific set of clinical criteria have been fulfilled," warned HHS Secretary Margaret Heckler. "Data suggest that the rate of success may be accomplished only in medical centers where a "critical mass" of clinical experience and expertise has been gathered."

"We would never take a position that would simply guarantee heart transplants to every American at government expense," she added. "We would oppose universal eligibility for government funding for heart transplants."

NIH Says 'No' to Central Transplant Registry

Accentralized national registry for bone marrow transplant donors should not be established at this time, a panel of National Institute of Health (NIH) transplant specialists has recommended.

Instead, the medical community should promote and expand the local registries that already exist, it said.

Only one-third of patients needing bone marrow transplants have an HLA-identical sibling donor. Since there is low probability of finding HLA matches in unrelated persons, registries seek large numbers of volunteers to serve as potential donors.

However, of the 70 patients transplanted with marrow from matched unrelated donors, only 20% have survived 3 months; one patient has survived 3½ years.

Merging local donor programs into a single national data base could in fact, be counterproductive, the panel said. Donation of bone marrow is highly dependent upon a spirit of voluntarism and altruism; local centers are effective because of the extent of local community involvement. A broad national program could be less effective, it believed.

Senate Panel Finds Pacemaker Problems Persist

Two years after a major shakeup in the pacemaker industry, significant problems persist, the Senate Special Committee on Aging has found.

Overutilization , defective devices, fraud and abuse continue to plague the pacemaker industry, its investigation revealed. In addition, the congressionally mandated National Pacemaker Registry — which would have monitored pacemaker performance and utilization — has not yet been established.

A 1982 Congressional hearing found that some pacemaker prices were marked up as much as 560% physicians were charging up to $2,000 for implants; warranties were uncollected by Medicare; physicians were making unnecessary implantations; and payments were provided to physicians who implanted a certain brand of pacemaker.

Based on these findings, Congress attempted to tighten up the industry by enacting legislation that established the Registry, new guidelines for implantation monitoring, and other provisions.

Now, Congress says that the law has been neglected and the Pacemaker Registry has become a "hot potato" between the Food and Drug Administration and the Health Care Financing Administration.

The new investigation found:

- continued overutilization of pacemakers; as many as 30,000 of the estimated 110,000 original pacemaker implants may have been unnecessary, according to a General Accounting Office review included in the investigation. In addition, as many as 21,000 replacement implants may be unnecessary.
- kickbacks, fraud and abuse continue. There have been two criminal convictions since the 1982 hearing: Pacesetters Systems Inc. and Telectronics officials pleaded guilty to offering kickbacks to physicians who used their pacemakers. Additional FBI investigations are underway.
- delay in implementing the Registry. The deadline for the Registry to be in operation was January 1985. Now FDA says the Registry will be operational by December 1987.

Senate Witnesses Drub Herbal Medicine

Manafacturers of non-prescription diet drugs should be required to prove that their products are safe and effective, just like pharmaceutical manufacturers, scientists urged legislators at a May congressional hearing.

"I do not believe that the makers of herbal medicines should be treated any differently than the makers of medicines of other kinds," said Varro E. Tyler, PhD, dean of the School of Pharmacy at Purdue University and an authority in herbal medicine.

"The public needs to be protected from false claims that can empty its pocketbook and destroy its health," said Xavier Pi-Sunyer, MD, associate professor of medicine at Columbia University.

Under current law, the government has the burden of proving that a diet scheme will not work as advertised. Manufacturers often try to find flaws in the government's case or delay legal proceedings, thus prolonging their sales of the product.

Herbalife International, the largest U.S. distributor of health products, came under fiercest attack by those attending the hearing of the investigative subcommittee of the Senate Committee on Governmental Affairs.

Although the $512 million-a-year company is prohibited from making medicinal claims for its products, it now used testimonials from customers on cable television. Overweight persons are vunerable consumers who are often embarrassed to admit that a product did not work, noted subcommittee staffers.

The FDA has received four reports of death, 90 complaints of illnesses and 32 reports alleging fraud by consumers of Herbalife products. Although no definite conclusions have been reached about the safety of the product, further investigation seems warranted, legislators said.

Subcommittee Chairman Sen. William V. Roth Jr. (R-DE) urged FDA to pay more scrupulous attention to the adverse reactions of the product. But the FDA needs a clear directive from Congress before regulating the diet industry, FDA Commissioner Frank E. Young, MD, responded.

The claims made for Herbalife products are false and deceptive, scientists testified. Most herbs do not produce the therapeutic effects claimed for them, they said. Even if the herbs had such effects, the Herbalife doses are too small to have any physiological impact, they added.

Morever, the products may be toxic to consumers. Some of their components — such as schisandra, tong kuei, caffeine, and some laxatives — could pose health problems to unsuspecting buyers, they said.

Congressional Budget Bleak for Physicians

Legislators, just returning from a Memorial Day recess, were expected during the first week of June to enter a new round in their annual wrestling match with a federal budget measure.

The action now moves to a conference between the House and the Senate where the Senate is considered likely to break away from its proposal to freeze cost of living adjustments for Social Security and other retirement plans and the House is expected to compromise somewhat on its plan to freeze defense spending.

Debate will also involve the Medicare program where the House has rejected the Senate approach of increasing some beneficiary cost-sharing and of exempting some Medicare "participating" physicians from a plan to continue the current freeze on Medicare fees. Medicaid, too, is an issue since the Senate assumed savings of $1.2 billion over three years while the House would permit inflation adjustments for this program.

The cliff-hanging Senate vote came in the wee hours of the morning on May 12 as California Republican Pete Wilson, recuperating from an appendectomy, arrived by ambulance to tie the vote. Vice President George Bush cast the deciding vote.

The Senate package would cut Medicaid by $1.2 billion in the next three years through "administrative actions." Medicare would be cut by $16.3 billion over the next three years and the current freeze on Medicare fees would continue for "nonparticipating" physicians. Some sort of a fee increase is assumed for physicians "participating" but details have not been worked out.

Hospitals diagnosis related group (DRG) rates would be frozen. The adjustment for indirect costs of graduate medical education would be cut in half and the payment for direct graduate medical education costs capped. The measure also would increase the premiums beneficiaries pay for medical services (Part B) under Medicare from the current 25% of costs to 30% of costs.

The House plan, adopted May 22, had a surprisingly smooth passage and no substantive debate on health issues. Much vaguer in its assumptions than the Senate measure, it calls for $13 billion in Medicare savings over the next three years. Some $3 billion is to come from unspecified reforms that are not to include beneficiary cost increases; another $10 billion is to come from a "one-year freeze" on Medicare providers.

While the proposal does not spell out any details, the size of the savings, the lack of any language to the contrary, and reports from House budget staff lead to the conclusion that the freeze on providers includes a continued freeze on all physician fees. There are some indications, however, that many House members would be willing to accept the Senate provision increasing fees for physicians who signed Medicare participating agreements.

Congressional members have reported, however, that although the American Medical Association and other medical groups have strongly protested budget proposals to continue the currect Medicare freeze, individual physicians have not expressed significant oppositon to this proposal. Their comments have sparked a massive AMA campaign to encourage physicians to communicate their concerns about the budget — particularly the continuation of the physician fee freeze and the cuts in Medicare support of graduate medical education — to their legislators.

Once a compromise has been hewn out by conferees and approved by both the House and Senate, action will move to the Congressional authorizing committees which are directed to meet the budget resolution's specific spending targets for programs under their jurisdiction but can choose their own method of meeting them.

This so-called reconciliation process is likely to begin in mid-June and for Medicare and Medicaid programs will involve the Senate Finance and House Ways and Means and Commerce Committees. An adjustment in the physician fee freeze and increases for at least part of the Medicare participating physicians are considered to have a chance of approval during this process.

Other provisions that could be included in a reconciliation package include bringing state and county workers into Medicare, freezing payments only for certain procedures, an experimental physician propective payment system, capitation payments, and increases in cigarette taxes.

Attitudes On HMOs Changing

Although most American physicians still think traditional fee-for-service medicine offers higher quality care than HMOs, 50% of all physicians now have a favorable attitude toward HMOs. Furthermore, HMO patients express greater satisfaction with the quality of their physicians than do non-HMO members.

These results from a just-published survey by Louis Harris Associates contrast with earlier surveys which found in 1980-81 that only 36% of physicians were favorably disposed toward HMOs and that non-HMO patients were more satisfied with the quality of their physicians than were HMO members. Conducted last fall for the Henry J. Kaiser Family Foundation, the survey results are cited as "dramatic evidence that physicians have changed their outlook on HMOs."

The survey found that about 9% of privately-insured American families now have a HMO member and that 40% of those interviewed were interested in joining an HMO. Among the elderly who have been targeted for an HMO enrollment effort, only 6% exhibited a strong interest while another 12% showed some interest.

HMOs are growing most rapidly on the East Coast and in the under 40 population.

Fraud Bill Moves Through House

A bill that would strengthen the government's authority to exclude disciplined physicians from Medicare and Medicaid is moving steadily through the House of Representatives but has not progressed in the Senate.

The bill, HR-1868, was approved unanimously by both the House Ways and Means and Energy and Commerce committees, thus clearing the way for consideration by the full House. The law is aimed at loopholes in the current law which permit a physician who loses a license in one state to treat Medicare and Medicaid patients in another state in which he also holds a license. Current law also does not permit the exclusion from a federal program of a provider who has been barred from another federal program.

HR-1868 would authorize the Department of Health and Human Services to bar from any federal program any provider who: was convicted of abusing program finances, patients, or controlled substances; lost or surrendered his license for cause in any state; provided excessive or poor quality care. If the provider was convicted of a criminal act against Medicare or one ot its patients, the minimum period of the exclusion would be five years.

The American Medical Association has supported the aim of the bill but did not support the minimum five-year exclusion and contended that the authority to exclude physicians who provided excessive or poor quality care already exists in the Peer Review Organization law.

Two other bills also were incorporated into HR-1868. One measure that had been opposed by the AMA would allow the Attorney General to revoke the drug prescribing authority of any physician banned from Medicare and Medicaid. The other, which had the general support of the AMA, would authorize civil and monetary penalties against anyone who misrepresents himself as a physician.

Senate Aging Committee chairman John Heinz (R-PA) has introduced similar legislation in the Senate but the bill has yet to be considered in Committee. Meanwhile, the Reagan administration reportedly is developing its own fraud and abuse measure and expects to have it introduced in the Senate.

AMA Loses Super-PRO Bid

A contract to monitor the work of Medicare's Peer Review Organizations (PROs) will not go to the American Medical Association, which had submitted two bids for the so-called Super-PRO.

Although the contract has not yet been awarded, the AMA was notified that it is no longer in the running for the contract. The letter of notification concluded that the AMA proposal is "not within the competitive range, price and other factors considered."

The notification comes amid rumors that budget cuts within the Health Care Financing Administration have left the agency with less than $2 million for the Super-PRO. It follows an earlier funding problem which forced PRO officials to scale down and reissue their Super-PRO bid request after the AMA and the other three bidders all came in at prices above the $5 million the agency was then reported to have set aside for the winning bidder.

The AMA reportedly was one of 13 bidders in a field that has now been narrowed to two. A selection is expected by about June 10.

The AMA had no immediate comment on the loss of the Super-PRO contract. At a Senate hearing earlier this spring, however, William Felts, MD, a member of the Association's council on legislation, said that while the contract should go to the AMA, the association would continue to oversee the PROs through its own special monitoring program even if the contract went to another bidder.

Health Manpower . . . Continued?

Rejecting President Reagan's contention that health manpower programs no longer warrant federal support, the House Commerce Committee last month approved bills extending programs the President proposed to abolish.

The programs include the health professions training assistance, nurse training programs, and the National Health Service Corps reauthorizations which were vetoed by the President last fall and eliminated in his fiscal 1986 budget on grounds that the U.S. already has a surplus of physicians and an adequate supply of nurses.

The committee also approved a bill continuing assistance to community and migrant health centers which the president had proposed to put into a block grant along with black lung disease programs. New federal support of HMOs would be eliminated.

Approved by a convincing 17-6 vote, the health professions bill (HR-2410) in fiscal 1986 would fund physician and other health professionals at their 1985 level of $141 million. Inflation adjustments would be authorized in 1987 and 1988.

Other bills approved by the committee are:

- HR-2418 which authorizes $1.3 billion over the next three fiscal years for community health centers and $167 million for migrant health centers. HMO aid would be phased out as current grants expire.
- HR-2237 which funds the National Health Service Corps field service at $75 million in each of the next three years and provides "such sums as necessary" to award 1175 new scholarships over the next three years.
- HR-2370 which funds nurse training programs at the current level of about $50 million in fiscal 1986. Funds would increase by 5% in 1987 and again in 1988.

MEDICAL MEETING CALENDAR

JULY

15-18 — *Hilton Head Island, SC:* **Clinical Cardiology.** AMA Category 1 and AAFP prescribed credit. Contact Div. of Cont. Ed., MCG, Augusta 30912. PH: 404/828-3967.

18-21 — *Kiawah Island, SC:* **Pulmonary Diseases.** Category 1 credit. Contact Div. of Cont. Ed., MCG, Augusta 30912. PH:404/828-3967.

24-28 — *Kiawah Island, SC:* **Critical Care Symposium.** AMA Category 1 and AAPF prescribed credit. Contact Div. of Cont. Ed., MCG, Augusta 30912. PH:404/828-3967.

29-31 — *Kiawah Island, SC:* **Pediatric Update — 1985.** AMA Category 1 and AAPF prescribed credit. Contact Div. of Cont. Ed., MCG, Augusta 30912. PH:404/828-3967.

AUGUST

1-3 — *Kiawah Island, SC:* **Clinical Genetics.** Category 1 credit. Contact Div. of Cont. Ed., MCG, Augusta 30912. PH:404/828-3967.

5-9 — *Hilton Head Island, SC:* **Your Practice, Your Money, Your Family.** Category 1 credit. Contact Div. of Cont. Ed., MCG, Augusta 30912. PH:404/828-3967.

5-9 — *Atlanta:* **A Comprehensive Board Review in Internal Medicine.** Category 1 credit. Contact Office of CME, Emory Univ. Sch. of Med., 1440 Clifton Rd., NE, Ste. 110, Atlanta 30322. PH:404/329-5695.

12-16 — *Kiawah Island, SC:* **Summer Imaging & Interventional Techniques.** Category 1 credit. Contact Office of CME, Emory Univ. Sch. of Med. , 1440 Clifton Rd., NE, Ste. 110, Atlanta 30322. PH:404/329-5695.

15-18 — *St. Simons Island:* **Georgia Psychiatric Association Meeting.** Category 1 credit. Contact James Moffett, MAG, 938 Peachtree St., NE, Altanta 30309. PH: 404/876-7535 or 1-800-282-0224 (toll free in Ga.).

24-25 — *Callaway Gardens:* **Georgia Society of Anesthesiologists and Alabama Society of Anesthesiologists.** Category 1 credit. Contact William Hammonds, MD, Secy-Treas., GSA, Emory Univ. Hosp., Dept. of Anesth., 1364 Clifton Rd., NE, Atlanta 30322. PH:404/321-0111.

30-September 1 — *Sea Island:* **American College of Physicians.** Contact Malcolm Page, MD, MCG, Augusta 30912. PH:404/828-0211 Ext. 4018.

SEPTEMBER

5-8 — *Ponte Vedra, FL:* **Georgia Thoracic Society Tri-State Meeting.** Contact Edwin A. Kramer, Amer. Lung Assn., Ga. Div., 2452 Spring Rd., Smyrna 30080. PH:404/434-5864.

15-18 — *Sea Island:* **Georgia State OB/GYN Society Meeting.** Contact Ralph A. Tillman, MD, Pres., Ga. State OB/GYN Society, 5040 Snapfinger Woods Dr., Ste. 204, Deactur 30035. PH:404/981-1123.

18-20 — *Savannah:* **Neonatology — The Sick Newborn.** AMA Category 1 and AAFP prescribed credit. Contact Div. of Cont. Ed., MCG, Augusta 30912. PH:404/828-3967.

19-21 — *Sea Island:* **Georgia Surgical Society Meeting.** Category 1 credit. Contact William C. McGarity, MD, Secy-Treas., GSS, Emory Univ. Clinic, 1365 Clifton Rd., NE, Atlanta 30322. PH:404/321-0111 Ext. 3322.

26-28 — *Hilton Head Island, SC:* **Frontiers in Nutrition.** AMA Category 1 and AAFP prescribed credit. Contact Div. of Cont. Ed., MCG, Augusta 30912. PH:404/828-3967.

OCTOBER

2-3 — *Atlanta:* **Georgia Chapter, Amer. Acad. of Pediatrics Fall Meeting.** Category 1 credit. Contact William C. Mankin, Exec. Secy., Ga. Chapter, AAP., 4059 Land O'Lakes Dr., NE, Atlanta 30342. PH:404/237-3922.

4 — *Atlanta:* **The Brain and the Heart: Clinical Interactions in Cardiovascular Disease.** Category 1 credit. Contact Office of CME, Emory Univ. Sch. of Med., 1440 Clifton Rd., NE, Ste. 110, Atlanta 30322. PH:404/329-5695.

16-19 — *Hilton Head Island, SC:* **Recent Developments in the Clinical Management of Diabetes and Endocrine Disorders.** Category 1 and AAFP prescribed credit. Contact Edwin D. Bransome, Jr., MD, Dept. of Medicine, MCG, Augusta 30912. PH:404/828-3445.

17-18 — *Atlanta:* **Current Issues in Reproductive Health.** Category 1 credit. Contact Office of CME, Emory Univ. Sch. of Med., 1440 Clifton Road., NE, Ste. 110, Atlanta 30322. PH:404/329-5695

17-20 — *Sea Island:* **Georgia Orthopaedic Society.** Contact William C. Collins, MD, Secy-Treas., Ga. Orthopaedic Society, 993-C Johnson Ferry Rd. NE, Atlanta 30342. PH:404/255-4582.

19-20 — *Atlanta:* **American Acad. of Facial Plastic & Reconstructive Surgery.** Contact AAFPRS, 1101 Vermont Ave., NW, Ste. 304, Washington, DC 20005. PH:202/842-4500.

19-20 — *Callaway Gardens:* **Georgia Gastroenterologic Society.** Category 1 credit. Contact Joe Griffin, Jr., MD, Vice Pres., GGS, G.I. Med., BIW 558, Med. Coll. of Ga., Augusta 30912. PH: 404/828-2238.

20-24 — *Atlanta:* **Amer. Acad. of Otolaryngology-Head and Neck Surgery.** Contact AAOHNS , 1101 Vermont Ave., NW, Ste.302, Washington, DC 20005. PH:202/289-4607.

23-25 — *Atlanta:* **Neuroradiology Update — 1985.** Category 1 credit. Contact Office of CME, Emory Univ. Sch. of Med., 1440 Clifton Rd., NE, Ste. 110, Atlanta 30322. PH:404/329-5695.

WE WANT TO SERVE YOU BETTER!

Although we receive many notices for excellent continuing education meetings, all too often the information is received too late for timely inclusion in our Medical Meeting Calendar. In order for *your* meeting to be included, please send us the necessary information *two months* in advance of the issue in which you want it to appear. For example: for the August issue, copy is due by June 20; for the September issue, copy is due by July 20, etc. Mail to: Stephen Davis, Director of Education, MAG, 938 Peachtree St., NE, Atlanta, GA 30309.

—*President's Letter*—



A Proud Salute

I SHOULD LIKE to take this opportunity to recognize and signally honor one of our members who was installed as the President of the American Medical Association on June 19, 1985: Harrison L. Rogers, Jr., M.D.

It is with distinct pride that I include myself as a classmate of Jack Rogers and remember some of the early beginnings of that now infamous Class of '52 at Emory. It has also been my privilege to have known him and his family, both professionally and socially, in Atlanta for the past 30 years.

When remembering the past, one can see more clearly the panorama of our lives. We are all taught basic knowledge, and the ethical and philosophical responsibility regarding medicine and our patient relationship. These are ingrained in us and remain with us forever.

There are other fields that some pursue, either part-time or full-time. One of these is "organized medicine." This is the grass-roots system in our country which starts with the county medical societies, goes to the state societies, and then to the national association.

The need for such an organization is unquestionable. The areas of work are many. These include assisting in setting criteria for medical education in medical schools, hospitals, and practice settings; working in the legal arena to maintain proper licensing to protect doctors and patients; promoting research and public health education; and last, but not least, attempting to represent and somehow correlate the many opinions of approximately 500,000 doctors. All of this, in addition to the countless liaison functions between hospitals, other health professionals, politicians, and the general public, is done in order to provide the very best medicine and health for our country.

Most of this rather awesome task is performed by dedicated physicians working without compensation except for the personal satisfaction of a job well done. Such a person is Dr. Rogers. Through the years, he has maintained an active role in his county medical society (Medical Association of Atlanta) and the Medical Association of Georgia. In more recent years, he has served as Delegate to the AMA, Vice Speaker, then Speaker of the House of Delegates of the AMA, and is now serving as its President. Enough cannot be said to adequately describe his efforts and influence.

When we realize he has accomplished all this while involved in an active practice of surgery, as well as being a husband and father, one becomes well aware of his capacity.

All of us in the MAG are proud of Dr. Rogers. All of Georgia is proud of Dr. Rogers. There *is* a way to measure excellence —

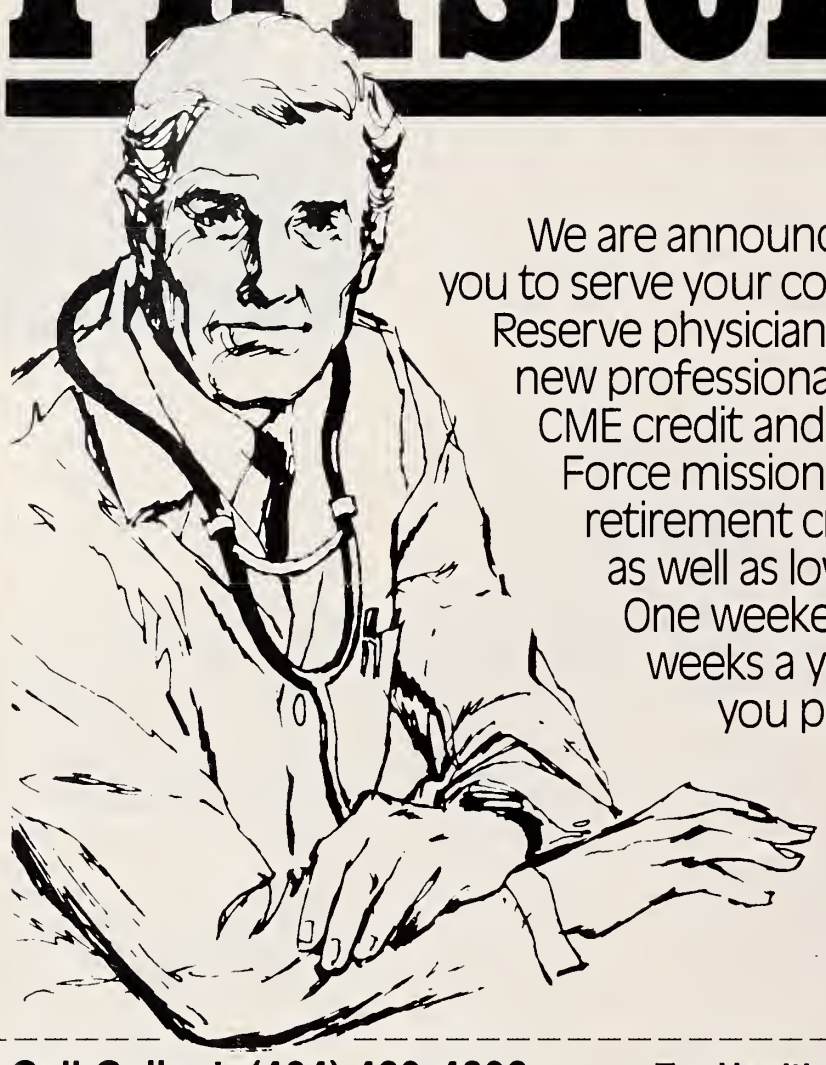
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*Cardizem is indicated in the treatment of angina pectoris due to coronary artery spasm and in the management of chronic stable angina (classic effort-associated angina) in patients who cannot tolerate therapy with beta-blockers and/or nitrates or who remain symptomatic despite adequate doses of these agents.

References:
1. Strauss WE, McIntyre KM, Parisi AF, et al: Safety and efficacy of diltiazem hydrochloride for the treatment of stable angina pectoris: Report of a cooperative clinical trial. Am J Cardiol 49:560-566, 1982.
2. Pool PE, Seagren SC, Bonanno JA, et al: The treatment of exercise-inducible chronic stable angina with diltiazem: Effect on treadmill exercise. Chest 78 (July suppl):234-238, 1980.

Reduces angina attack frequency*
42% to 46% decrease reported in multicenter study.[1]

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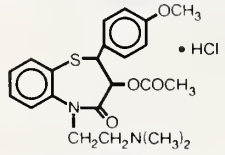
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PROFESSIONAL USE INFORMATION

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30 mg and 60 mg tablets

DESCRIPTION

CARDIZEM® (diltiazem hydrochloride) is a calcium ion influx inhibitor (slow channel blocker or calcium antagonist). Chemically, diltiazem hydrochloride is 1,5-Benzothiazepin-4(5H)one,3-(acetyloxy) -5-[2-(dimethylamino)ethyl]-2,3-dihydro-2-(4-methoxyphenyl)-, monohydrochloride,(+) -cis-. The chemical structure is:



Diltiazem hydrochloride is a white to off-white crystalline powder with a bitter taste. It is soluble in water, methanol, and chloroform. It has a molecular weight of 450.98. Each tablet of CARDIZEM contains either 30 mg or 60 mg diltiazem hydrochloride for oral administration.

CLINICAL PHARMACOLOGY

The therapeutic benefits achieved with CARDIZEM are believed to be related to its ability to inhibit the influx of calcium ions during membrane depolarization of cardiac and vascular smooth muscle.

Mechanisms of Action. Although precise mechanisms of its antianginal actions are still being delineated, CARDIZEM is believed to act in the following ways:

1. Angina Due to Coronary Artery Spasm: CARDIZEM has been shown to be a potent dilator of coronary arteries both epicardial and subendocardial. Spontaneous and ergonovine-induced coronary artery spasm are inhibited by CARDIZEM.
2. Exertional Angina: CARDIZEM has been shown to produce increases in exercise tolerance, probably due to its ability to reduce myocardial oxygen demand. This is accomplished via reductions in heart rate and systemic blood pressure at submaximal and maximal exercise work loads.

In animal models, diltiazem interferes with the slow inward (depolarizing) current in excitable tissue. It causes excitation-contraction uncoupling in various myocardial tissues without changes in the configuration of the action potential. Diltiazem produces relaxation of coronary vascular smooth muscle and dilation of both large and small coronary arteries at drug levels which cause little or no negative inotropic effect. The resultant increases in coronary blood flow (epicardial and subendocardial) occur in ischemic and nonischemic models and are accompanied by dose-dependent decreases in systemic blood pressure and decreases in peripheral resistance.

Hemodynamic and Electrophysiologic Effects. Like other calcium antagonists, diltiazem decreases sinoatrial and atrioventricular conduction in isolated tissues and has a negative inotropic effect in isolated preparations. In the intact animal, prolongation of the AH interval can be seen at higher doses.

In man, diltiazem prevents spontaneous and ergonovine-provoked coronary artery spasm. It causes a decrease in peripheral vascular resistance and a modest fall in blood pressure and, in exercise tolerance studies in patients with ischemic heart disease, reduces the heart rate-blood pressure product for any given work load. Studies to date, primarily in patients with good ventricular function, have not revealed evidence of a negative inotropic effect; cardiac output, ejection fraction, and left ventricular end diastolic pressure have not been affected. There are as yet few data on the interaction of diltiazem and beta-blockers. Resting heart rate is usually unchanged or slightly reduced by diltiazem.

Intravenous diltiazem in doses of 20 mg prolongs AH conduction time and AV node functional and effective refractory periods approximately 20%. In a study involving single oral doses of 300 mg of CARDIZEM in six normal volunteers, the average maximum PR prolongation was 14% with no instances of greater than first-degree AV block. Diltiazem-associated prolongation of the AH interval is not more pronounced in patients with first-degree heart block. In patients with sick sinus syndrome, diltiazem significantly prolongs sinus cycle length (up to 50% in some cases).

Chronic oral administration of CARDIZEM in doses of up to 240 mg/day has resulted in small increases in PR interval, but has not usually produced abnormal prolongation. There were, however, three instances of second-degree AV block and one instance of third-degree AV block in a group of 959 chronically treated patients.

Pharmacokinetics and Metabolism. Diltiazem is absorbed from the tablet formulation to about 80% of a reference capsule and is subject to an extensive first-pass effect, giving an absolute bioavailability (compared to intravenous dosing) of about 40%. CARDIZEM undergoes extensive hepatic metabolism in which 2% to 4% of the unchanged drug appears in the urine. In vitro binding studies show CARDIZEM is 70% to 80% bound to plasma proteins. Competitive ligand binding studies have also shown CARDIZEM binding is not altered by therapeutic concentrations of digoxin, hydrochlorothiazide, phenylbutazone, propranolol, salicylic acid, or warfarin. Single oral doses of 30 to 120 mg of CARDIZEM result in detectable plasma levels within 30 to 60 minutes and peak plasma levels two to three hours after drug administration. The plasma elimination half-life following single or multiple drug administration is approximately 3.5 hours. Desacetyl diltiazem is also present in the plasma at levels of 10% to 20% of the parent drug and is 25% to 50% as potent a coronary vasodilator as diltiazem. Therapeutic blood levels of CARDIZEM appear to be in the range of 50 to 200 ng/ml. There is a departure from dose-linearity when single doses above 60 mg are given; a 120-mg dose gave blood levels three times that of the 60-mg dose. There is no information about the effect of renal or hepatic impairment on excretion or metabolism of diltiazem.

INDICATIONS AND USAGE

1. **Angina Pectoris Due to Coronary Artery Spasm.** CARDIZEM is indicated in the treatment of angina pectoris due to coronary artery spasm. CARDIZEM has been shown effective in the treatment of spontaneous coronary artery spasm presenting as Prinzmetal's variant angina (resting angina with ST-segment elevation occurring during attacks).
2. **Chronic Stable Angina (Classic Effort-Associated Angina).** CARDIZEM is indicated in the management of chronic stable angina. CARDIZEM has been effective in controlled trials in reducing angina frequency and increasing exercise tolerance.

There are no controlled studies of the effectiveness of the concomitant use of diltiazem and beta-blockers or of the safety of this combination in patients with impaired ventricular function or conduction abnormalities.

CONTRAINOICATIONS

CARDIZEM is contraindicated in (1) patients with sick sinus syndrome except in the presence of a functioning ventricular pacemaker, (2) patients with second- or third-degree AV block except in the presence of a functioning ventricular pacemaker, and (3) patients with hypotension (less than 90 mm Hg systolic).

WARNINGS

1. **Cardiac Conduction.** CARDIZEM prolongs AV node refractory periods without significantly prolonging sinus node recovery time, except in patients with sick sinus syndrome. This effect may rarely result in abnormally slow heart rates (particularly in patients with sick sinus syndrome) or second- or third-degree AV block (six of 1243 patients for 0.48%). Concomitant use of diltiazem with beta-blockers or digitalis may result in additive effects on cardiac conduction. A patient with Prinzmetal's angina developed periods of asystole (2 to 5 seconds) after a single dose of 60 mg of diltiazem.
2. **Congestive Heart Failure.** Although diltiazem has a negative inotropic effect in isolated animal tissue preparations, hemodynamic studies in humans with normal ventricular function have not shown a reduction in cardiac index nor consistent negative effects on contractility (dp/dt). Experience with the use of CARDIZEM alone or in combination with beta-blockers in patients with impaired ventricular function is very limited. Caution should be exercised when using the drug in such patients.
3. **Hypotension.** Decreases in blood pressure associated with CARDIZEM therapy may occasionally result in symptomatic hypotension.
4. **Acute Hepatic Injury.** In rare instances, patients receiving CARDIZEM have exhibited reversible acute hepatic injury as evidenced by moderate to extreme elevations of liver enzymes. (See PRECAUTIDNS and ADVERSE REACTIONS.)

PRECAUTIONS

General. CARDIZEM (diltiazem hydrochloride) is extensively metabolized by the liver and excreted by the kidneys and in bile. As with any new drug given over prolonged periods, laboratory parameters should be monitored at regular intervals. The drug should be used with caution in patients with impaired renal or hepatic function. In subacute and chronic dog and rat studies designed to produce toxicity, high doses of diltiazem were associated with hepatic damage. In special subacute hepatic studies, oral doses of 125 mg/kg and higher in rats were associated with histological changes in the liver which were reversible when the drug was discontinued. In dogs, doses of 20 mg/kg were also associated with hepatic changes; however, these changes were reversible with continued dosing.

Drug Interaction. Pharmacologic studies indicate that there may be additive effects in prolonging AV conduction when using beta-blockers or digitalis concomitantly with CARDIZEM. (See WARNINGS).

Controlled and uncontrolled domestic studies suggest that concomitant use of CARDIZEM and beta-blockers or digitalis is usually well tolerated. Available data are not sufficient, however, to predict the effects of concomitant treatment, particularly in patients with left ventricular dysfunction or cardiac conduction abnormalities. In healthy volunteers, diltiazem has been shown to increase serum digoxin levels up to 20%.

Carcinogenesis, Mutagenesis, Impairment of Fertility. A 24-month study in rats and a 21-month study in mice showed no evidence of carcinogenicity. There was also no mutagenic response in in vitro bacterial tests. No intrinsic effect on fertility was observed in rats.

Pregnancy. Category C. Reproduction studies have been conducted in mice, rats, and rabbits. Administration of doses ranging from five to ten times greater (on a mg/kg basis) than the daily recommended therapeutic dose has resulted in embryo and fetal lethality. These doses, in some studies, have been reported to cause skeletal abnormalities. In the perinatal/postnatal studies, there was some reduction in early individual pup weights and survival rates. There was an increased incidence of stillbirths at doses of 20 times the human dose or greater.

There are no well-controlled studies in pregnant women; therefore, use CARDIZEM in pregnant women only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers. It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, exercise caution when CARDIZEM is administered to a nursing woman if the drug's benefits are thought to outweigh its potential risks in this situation.

Pediatric Use. Safety and effectiveness in children have not been established.

ADVERSE REACTIONS

Serious adverse reactions have been rare in studies carried out to date, but it should be recognized that patients with impaired ventricular function and cardiac conduction abnormalities have usually been excluded.

In domestic placebo-controlled trials, the incidence of adverse reactions reported during CARDIZEM therapy was not greater than that reported during placebo therapy.

The following represent occurrences observed in clinical studies which can be at least reasonably associated with the pharmacology of calcium influx inhibition. In many cases, the relationship to CARDIZEM has not been established. The most common occurrences, as well as their frequency of presentation, are: edema (2.4%), headache (2.1%), nausea (1.9%), dizziness (1.5%), rash (1.3%), asthenia (1.2%), AV block (1.1%). In addition, the following events were reported infrequently (less than 1%) with the order of presentation corresponding to the relative frequency of occurrence.

Cardiovascular:	Flushing, arrhythmia, hypotension, bradycardia, palpitations, congestive heart failure, syncope.
Nervous System:	Paresthesia, nervousness, somnolence, tremor, insomnia, hallucinations, and amnesia.
Gastrointestinal:	Constipation, dyspepsia, diarrhea, vomiting, mild elevations of alkaline phosphatase, SGOT, SGPT, and LDH.
Dermatologic:	Pruritus, petechiae, urticaria, photosensitivity.
Other:	Polyuria, nocturia.

The following additional experiences have been noted:

A patient with Prinzmetal's angina experiencing episodes of vasospastic angina developed periods of transient asymptomatic asystole approximately five hours after receiving a single 60-mg dose of CARDIZEM.

The following postmarketing events have been reported infrequently in patients receiving CARDIZEM: erythema multiforme; leukopenia; and extreme elevations of alkaline phosphatase, SGOT, SGPT, LDH, and CPK. However, a definitive cause and effect between these events and CARDIZEM therapy is yet to be established.

OVERDOSAGE OR EXAGGERATEO RESPONSE

Overdosage experience with oral diltiazem has been limited. Single oral doses of 300 mg of CARDIZEM have been well tolerated by healthy volunteers. In the event of overdosage or exaggerated response, appropriate supportive measures should be employed in addition to gastric lavage. The following measures may be considered:

Bradycardia	Administer atropine (0.60 to 1.0 mg). If there is no response to vagal blockade, administer isoproterenol cautiously.
High-Degree AV Block	Treat as for bradycardia above. Fixed high-degree AV block should be treated with cardiac pacing.
Cardiac Failure	Administer inotropic agents (isoproterenol, dopamine, or dobutamine) and diuretics.
Hypotension	Vasopressors (eg, dopamine or levarterenol bitartrate).

Actual treatment and dosage should depend on the severity of the clinical situation and the judgment and experience of the treating physician.

The oral LD_{50}'s in mice and rats range from 415 to 740 mg/kg and from 560 to 810 mg/kg, respectively. The intravenous LD_{50}'s in these species were 60 and 38 mg/kg, respectively. The oral LD_{50} in dogs is considered to be in excess of 50 mg/kg, while lethality was seen in monkeys at 360 mg/kg. The toxic dose in man is not known, but blood levels in excess of 800 ng/ml have not been associated with toxicity.

OOSAGE AND ADMINISTRATION

Exertional Angina Pectoris Due to Atherosclerotic Coronary Artery Disease or Angina Pectoris at Rest Due to Coronary Artery Spasm. Dosage must be adjusted to each patient's needs. Starting with 30 mg four times daily, before meals and at bedtime, dosage should be increased gradually (given in divided doses three or four times daily) at one- to two-day intervals until optimum response is obtained. Although individual patients may respond to any dosage level, the average optimum dosage range appears to be 180 to 240 mg/day. There are no available data concerning dosage requirements in patients with impaired renal or hepatic function. If the drug must be used in such patients, titration should be carried out with particular caution.

Concomitant Use With Other Antianginal Agents:

1. **Sublingual NTG** may be taken as required to abort acute anginal attacks during CARDIZEM therapy.
2. **Prophylactic Nitrate Therapy** — CARDIZEM may be safely coadministered with short- and long-acting nitrates, but there have been no controlled studies to evaluate the antianginal effectiveness of this combination.
3. **Beta-blockers.** (See WARNINGS and PRECAUTIDNS.)

HOW SUPPLIED

Cardizem 30-mg tablets are supplied in bottles of 100 (NDC 0088-1771-47) and in Unit Dose Identification Paks of 100 (NDC 0088-1771-49). Each green tablet is engraved with MARION on one side and 1771 engraved on the other. CARDIZEM 60-mg scored tablets are supplied in bottles of 100 (NDC 0088-1772-47) and in Unit Dose Identification Paks of 100 (NDC 0088-1772-49). Each yellow tablet is engraved with MARIDN on one side and 1772 on the other.

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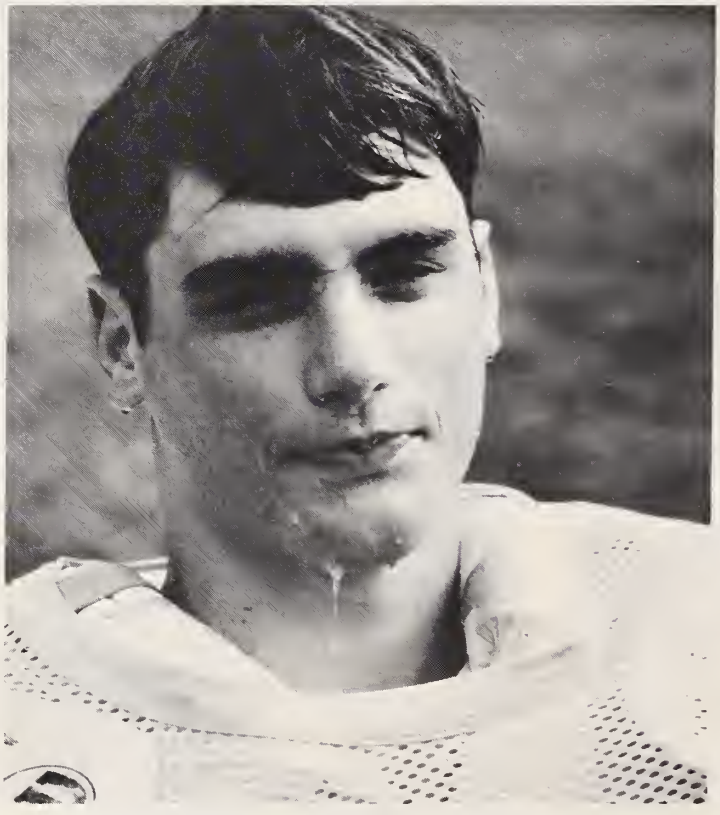
HEAT STRESS IN ATHLETES

B. K. SHERWOOD, M.D., AND WILLIAM B. STRONG, M.D.

Rapid effective cooling is the hallmark of treatment.

THE EVALUATION and management of heat injury in athletes is a challenging medical problem. As an example, although the incidence of significant heat injury in road race participants is probably less than 1%, this could mean as many as 50 to 100 heat casualties in some large warm weather events.[1] On July 4, 1977, during the 10-kilometer Peachtree Road Race in Atlanta, 56 of 5,682 registrants needed emergency room care for exertional heat injury. The number of subclinical cases of heat injury increases this incidence.

With an increased emphasis on jogging in the last few years, more and more people are being exposed to the dangers of heat injury. To prevent such injury, guidelines, based largely on laboratory observations, have been given to sports physicians. Recently, field studies have been performed, such as the one by England et al,[2] which tested the laboratory findings and identified preventive measures.



Heat injury can be avoided by taking preventive measures when exercising in hot weather.

Signs and Symptoms

The regulation of body temperature during exercise is primarily through cooling from sweat evaporation. The efficiency of sweat evaporation is strongly influenced by the relative humidity and wind velocity and probably does not exceed 70% to 80% under ideal conditions.[3] Beginning from a state of normal temperature and fluid volume, exercise produces a combination of progressive dehydration and controlled hyperthermia. This response is maintained in a steady state until increasing heat gain exceeds heat losses. Dehydration further complicates the situation. Wyndham has shown a linear increase in rectal temperature with progressive dehydration beyond 3% water deficit.[4]

Heat injury may present as heat exhaustion, heatstroke, or a mixed heat injury syndrome. The symptoms of heat exhaustion victims are shown in Table I. The victim may be mildly confused and somewhat irritable. Since volume depletion may be present, orthostatic changes may occur. Also, the highly conditioned athlete may show a "relative bradycardia" (90-100 beats per minute).

Heatstroke signs and symptoms are also presented in Table I. Any major disturbance in thought pattern or behavior is strong evidence for heatstroke. The measurement of rectal temperature is important in differentiating heatstroke from heat exhaustion. Volume depression is usually significant in heatstroke.

The mixed heat injury syndrome consists of signs and symptoms characteristic of both heat exhaustion and heatstroke, such as volume depletion, along with significant hyperthermia but no signs of disorientation. Active sweating has been documented in all types of exertional heat injury including heatstroke.

Treatment

As with any medical emergency, exertional heat injury requires prompt diagnosis and treatment. Since heat-

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stroke results from the detrimental effects of heat on cells, rapid effective cooling is of primary importance. Initial management in the field or at the hospital is outlined in Table II. It should be noted that "hospital" here applies to either the community hospital, emergency room, or the field hospital. Any organized running event should have a field hospital equipped as outlined in Table III.

Two methods have been used to lower a raised body temperature. The more traditional method is the immersion of a patient in a tub of iced water while massaging the skin vigorously. A major disadvantage to this method is that the transfer of heat from the body is impeded due to the intense vasoconstriction caused by iced water immersion. There is no evidence that vigorous massaging prevents the vasoconstriction. Also, for the semiconscious or conscious patient, immersion in iced water is extremely uncomfortable which results in agitation and struggling and further increases the metabolic heat production and oxygen requirement of tissues.

The evaporative cooling method is preferable. This method involves repeated wetting of the skin with tap water while the skin is fanned strongly with air at room temperature.

Although rapid effective cooling is the hallmark of treatment of heatstroke, it is equally important to initiate therapy for shock and fluid and electrolyte imbalance as well as support vital organs. Intubation may be necessary to maintain an airway. Large volumes of intravenous fluids should not be given initially, since the vasoconstriction which occurs after cooling may lead to overloading of the central circulation with consequent pulmonary edema.[6] In the management of hypotension, potent vasopressors should be avoided, since peripheral vasoconstriction prevents heat loss. Since heatstroke may be complicated by renal failure,[6] attempts should be made to improve renal perfusion with mannitol or furosemide. There is no clinical or experimental evidence in favor of the use of steroids in heat injury.

Table I[1] — Signs and Symptoms of Heat Exhaustion and Heatstroke

Heat Exhaustion	*Heatstroke*
Extreme fatigue	Disoriented, may have headache
Nausea	May be unconscious
Conscious	Sweating may or may not be present
Active sweating	Pulse 120-160
Pulse 100-140	Rectal temperature usually greater than or equal to 41°C
Temperature elevated but less than or equal to 40°C (rectal)	

Table II — Management of Exertional Injury

In the Field	*In the Field Hospital or Hospital Emergency Room*
1st Priority: rapid effective cooling	3 Priorities
—Move to shaded area	1. Start or continue rapid effective cooling using evaporative cooling method.
—Remove as much of clothing as possible	2. Initiate intravenous fluid and electrolyte therapy if evidence of hypovolemia is present.
—Keep skin moist	3. May need to provide further support for vital organs, i.e., oxygen by mask or intubation.
—Fan skin vigorously	

Table III[5] — Equipment Needed at Field Hospital and At Aid Station

Aid Station	*Field Hospital*
Ice in small plastic bags	Stretchers
Stretchers	Intravenous setups
Ace wraps	Inflatable arm and leg splints
4 in. x 4 in. gauze pads	Tape
1½ in. tape	Ace raps
Surgical soap	Surgical soap
Bandaids	Oxygen tanks with masks
Petroleum jelly	ECG monitors
Inflatable arm and leg splints	Ice in small plastic bags

Table IV[5] — Preventive Measures

1. Train adequately. For example, in training for a footrace, include at least 2 runs in the previous month that are at least 2/3 the length of the race.
2. Do not run to exhaustion the week before the race.
3. You are running on yesterday's meals.
   —Emphasize carbohydrates the day before the race.
   —Eat a light meal 2 hours before the race.
   —Avoid fatty meals on race day.
4. Maintain adequate hydration.
   —Drink 2 eight ounce glasses of fluid 15 minutes before the race.
   —Drink continuously throughout run.
5. Don't forget pre-run warmup.
   —If you feel muscle tightness or cramps during race then stop and stretch.

Prevention

Even with appropriate management and treatment, exertional heat injury still causes death and permanent damage. Successful prevention of exertional heat injury depends upon recognizing risk factors and employing prophylactic measures. As an example, in the field study by England et al[2] of the 1979 Peachtree Road Race, results suggested that runners should train to run 10 kilometers in 48 minutes or to run 1.6 kilometers in 6:10 minutes. Also, runners should run at least 37 kilometers per week in the 4 weeks prior to the race. Table IV outlines preventive measures to be followed both before running in an event and during an event.

The mixed heat injury syndrome consists of signs and symptoms characteristic of both heat exhaustion and heatstroke, such as volume depletion, along with significant hyperthermia but no signs of disorientation.

Most recently Hughson et al[7] utilized a portable heat stress monitor which allowed simultaneous recording of dry bulb, wet bulb, and black globe temperature as well as the computation of wet bulb-globe temperature index. The monitor was used to obtain data from typical race conditions and to measure environmental parameter and body temperature responses during road race simulation. Based on the results of this study, a color coded system was developed using the wet bulb-globe temperature index to identify zones of low moderate, highly and extremely high risk regarding heat injury. This system is shown in Table V. The ambient air temperature measured by the dry bulb, the humidity assessed by the wet bulb, and the radiant heat load monitored by the black globe contributed separately or together to impose a high thermal load on the athletes.

TABLE V[7] — Heat Stress Warnings Based on Wet Bulb-Globe Temperature Index

Flag Color and Corresponding WBGT	*Risk*	*Warnings*
GREEN below 18°C (64°F)	**Low**	**Caution is needed**
YELLOW 18°C-22°C (64-72°F)	**Moderate**	**Monitor for signs and symptoms of heat injury**
RED 23-28°C (73-82°F)	**High**	**Slow running pace. Do not run if unfit or ill**
BLACK Above 28°C (82°F)	**Extremely High**	**Races should not start under these conditions**

In the management of hypotension, potent vasopressors should be avoided, since peripheral vasoconstriction prevents heat loss.

To prevent heat injury, guidelines, based largely on laboratory observations, have been given to sports physicians.

Conclusion

Heat injury is a threat to all athletes, regardless of experience or fitness level. As with any medical problem, the best defense lies in prevention. Therefore, it is essential that recommendations be provided before an athletic event regarding training and conditioning. Instructions should be provided regarding pre-race nutrition and fluid intake as well as education in the area of recognition of heat injury symptoms. As a general guideline, the color coded system base on wet bulb-globe temperature index should give an accurate estimate of dangers in warm weather events.

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SCREENING HIGH SCHOOL ATHLETES

STEPHEN C. HUNTER, M.D.

A program designed to minimize injury and maximize performance.

THE QUALITY of pre-season medical evaluation of the high school athlete has varied extremely from one community to another. Most state and local athletic associations require a physician's approval permit, which many young athletes receive from their private physicians. Far too often, a list of prospective athletes' names is perfunctorily signed by a physician in lieu of a formal physical examination. Worse still, some athletes and coaches ignore the regulation altogether!

Here is a glaring problem: the failure to properly evaluate athletes before allowing them to compete leads to a lack of understanding about the health and fitness factors vital to performance and to the prevention of athletic injury.

In an attempt to improve the local physical examination program, members of the medical community in Columbus began working with coaches, medical personnel, and community members to provide a preseason screening program for high school athletes. From this combined effort, the Institute of Athletic Health Care and Research, Inc., was incorporated as a non-profit organization to administer the program.

This program is unique because it can be applied efficiently to a large number of athletes, requires no elaborate test equipment, and produces reliable data.

Elements of the Screening Program

The examination program is funded by donations that cover expenses for materials and data processing and is staffed entirely by volunteers. No one is paid. The nominal exam fee is charged to each athlete and is returned penny-for-penny to their school's athletic health care expense account, which is handled by the Institute's treasurer. This account provides funding toward expenditures for athletic health care equipment and facilities.

The program requires a variety of specialty services. Physicians perform the general physical and orthopaedic examinations, nurses staff the vital signs stations, and dentists evaluate oral tissues. Physical and occupational therapists review upper and lower extremity functions, and exercise physiologists supervise the anthropometric measurements. Community members and students record and process information and act as guides. Computer analysis, which is donated by a local organization, facilitates handling the voluminous amount of material, provides coaches and trainers with detailed information, and aids research efforts.

A Station-to-Station Examination

The examination consists of several phases: medical history, physical examination, orthopaedic evaluation, musculoskeletal evaluation, and fitness and conditioning. Each phase is completed in a station-to-station manner in a large school complex, which provides ample space and quiet areas (Figure 1). Directional signs ensure

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This article was sponsored by MAG Sports Medicine Committee.

smooth traffic flow, and weekend use allows access to the entire building. All information is recorded on a single, reuseable examination form which the athlete carries from one station to the next.

At the medical history station, the athlete is interviewed each year regarding prior illnesses, injuries, and operations. This personal interview prevents the inaccuracies that can result when athletes are asked to check multiple blanks from a list of assorted ailments. If, in subsequent years of examination, the athlete has had no new injuries or illnesses, the interviewer can exempt him from portions of the examination that might be redundant. Experience has shown that these procedures ensure valid historical data and increase efficiency.

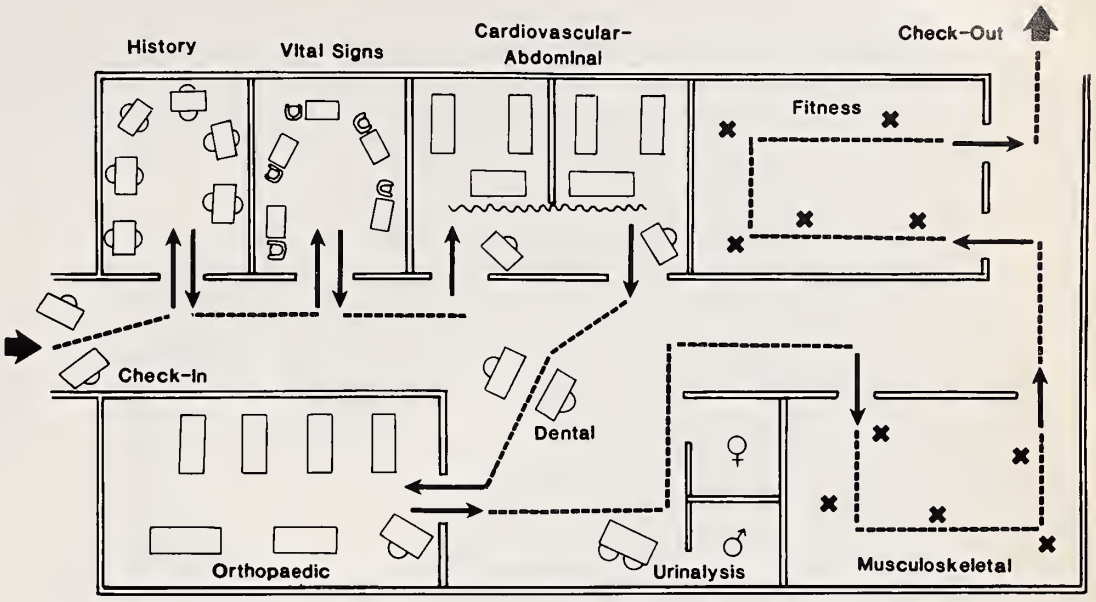


Figure 1. Routing diagram of physical examination done in a specialty-related station-to-station manner.

The program requires a variety of specialty services.

At the next station, measurements of height, weight, pulse, and blood pressure are taken. The athlete receives a thorough physical examination of the head and neck and the cardiopulmonary, gastrointestinal, and genitourinary systems. The head, eyes, ears, nose, and throat are examined with the use of optical equipment when needed. The chest is examined in a quiet area to aid in the auscultation of heart and lung sounds. The abdomen is palpated to detect tenderness, masses, or hernias, and the integument is evaluated for defects or lesions. A urinalysis is performed to detect sugar, albumin, and hematuria. Oral tissues are evaluated to reveal tooth decay and soft tissue disease. The athlete with physical problems is counseled on the need for immediate attention and is not allowed to compete until he has been treated.

Because most sports-related injuries are orthopaedic in nature, a significant portion of the examination is



Figure 2 — Stress testing to measure range-of-motion of the shoulder.

devoted to orthopaedic evaluation. At this station, the knees are examined for abnormal alignment, patellar dysfunction, ligamentous instability, and internal derangement. The upper extremity is examined by stress testing to measure range-of-motion of the shoulders and elbows and to detect instability (Figures 2 and 3). The ankles and feet are also examined for evidence of instability or deformity.

At the musculoskeletal station, physical therapists evaluate the musculoskeletal system by testing the upper and lower extremities for muscle group balance, strength, and flexibility. Scoliosis screening is performed because this is a high risk age group. Girth and length measurements of the neck are taken to aid in the study of injuries and pinched nerves.

At the last station, the athlete undergoes a unique battery of tests that measure fitness and conditioning. Pullups, situps, dips, and vertical jumps provide indexes of the conditioning of the upper and lower extremities. Skin fold testing of the chest, abdomen, and other areas reveals body fat percentage. Somatic measurements are taken to help project ideal body weight and determine skeletal age. Grip strength measurements help indicate absolute strength.

Program Advantages

Aside from satisfying the requirements of state athletic associations, this program administers a thorough physical examination to young athletes, many of whom were last seen by a physician on the day they were born! By carefully noting and recording weakness and instability, coaches and trainers are kept informed of the potential hazards and the solutions for each deficiency.

In addition, this program is designed to improve the athlete's performance. Strength and flexibility are known to decrease the risk of injury to the neck, shoulder, back, thigh, and ankle and improve power, agility, and speed. By correcting the weaknesses and contractures that are detected through measurements of conditioning and flexibility, the athlete's risk of injury should decrease and his performance improve.



Figure 3 — Examination for range-of-motion and stability of the elbow.

Certainly, similar screening programs exist in the collegiate and professional ranks. However, this program is unique because it can be applied efficiently to a large number of athletes, requires no elaborate test equipment, and produces reliable data. It has the capability of universal application. Everything required to perform these physical examinations is readily available in an interested and active community.

The protocol described here is not the ultimate solution to pre-season athletic screening. It has been revised many times and will benefit from future input. However, it is simple, inexpensive, and most important, successful. The concept of a uniform screening program for the high school athlete should be encouraged in an effort to improve performance and decrease the risk of injury. ■


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1/50
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See next page for brief summary of prescribing information.

Brief Summary of Prescribing Information
NORLESTRIN® (norethindrone acetate and ethinyl estradiol tablets, USP)

See section under **Special Notes on Administration and HOW SUPPLIED.**
Before prescribing, please see full prescribing information. A Brief Summary follows.

DESCRIPTION
Norlestrin Products are progestogen-estrogen combinations.

INDICATIONS AND USAGE
Norlestrin Products are indicated for the prevention of pregnancy in women who elect to use oral contraceptives as a method of contraception.

In clinical trials with Norlestrin 1/50 involving 25,983 therapy cycles, there was a pregnancy rate of 0.05 per 100 woman-years; in clinical trials with Norlestrin 2.5/50 involving 96,388 cycles, there was a pregnancy rate of 0.22 per 100 woman-years.

Dose-Related Risk of Thromboembolism from Oral Contraceptives: Studies have shown a positive association between the dose of estrogens in oral contraceptives and the risk of thromboembolism. It is prudent and in keeping with good principles of therapeutics to minimize exposure to estrogen. The oral contraceptive prescribed for any given patient should be that product which contains the least amount of estrogen that is compatible with an acceptable pregnancy rate and patient acceptance.

CONTRAINDICATIONS
1. Thrombophlebitis or thromboembolic disorders
2. A past history of deep-vein thrombophlebitis or thromboembolic disorders
3. Cerebral vascular or coronary artery disease
4. Known or suspected carcinoma of the breast
5. Known or suspected estrogen-dependent neoplasia
6. Undiagnosed abnormal genital bleeding
7. Known or suspected pregnancy (See WARNING No. 5)
8. Benign or malignant liver tumor which developed during the use of oral contraceptives or other estrogen-containing products.

WARNINGS

Cigarette smoking increases the risk of serious cardiovascular side effects from oral contraceptive use. The risk increases with age and with heavy smoking (15 or more cigarettes per day) and is quite marked in women over 35 years of age. Women who use oral contraceptives should be strongly advised not to smoke.

The use of oral contraceptives is associated with increased risk of several serious conditions including thromboembolism, stroke, myocardial infarction, hepatic adenoma, gallbladder disease, and hypertension. Practitioners prescribing oral contraceptives should be familiar with the following information relating to these risks.

1. *Thromboembolic Disorders and Other Vascular Problems.* An increased risk of thromboembolic and thrombotic disease associated with the use of oral contraceptives is well-established. Studies have demonstrated an increased risk of fatal and nonfatal venous thromboembolism and stroke, both hemorrhagic and thrombotic.

Cerebrovascular Disorders: In a collaborative study in women with and without predisposing causes, it was estimated that the risk of hemorrhagic stroke was 2.0 times greater in users than nonusers, and the risk of thrombotic stroke was 4.0 to 9.5 times greater.

Myocardial Infarction: An increased risk of myocardial infarction associated with oral contraceptives has been reported confirming a previously suspected association. These studies found that the greater the number of underlying risk factors (cigarette smoking, hypertension, hypercholesterolemia, obesity, diabetes, history of preeclamptic toxemia) for coronary artery disease, the higher the risk of developing myocardial infarction, regardless of whether the patient was an oral contraceptive user or not. Oral contraceptives, however, were found to be a clear additional risk factor.

It has been estimated that users who do not smoke (smoking is considered a major predisposing condition to myocardial infarction) are about twice as likely to have a fatal myocardial infarction as nonusers who do not smoke. Oral contraceptive users who are smokers have about a fivefold increased risk of fatal infarction compared to users who do not smoke, but about a tenfold to twelvefold increased risk compared to nonusers who do not smoke. The amount of smoking is also an important factor.

Risk of Dose: In an analysis of data, British investigators concluded that the risk of thromboembolism, including coronary thrombosis, is directly related to the dose of estrogen used in oral contraceptives; however, the quantity of estrogen may not be the sole factor involved.

Persistence of Risk: Two studies have suggested that an increased risk may persist for as long as 6 years after discontinuation of oral contraceptive use for cerebrovascular disease and 9 years for myocardial infarction. In addition, a prospective study suggested the persistence of risk for subarachnoid hemorrhage.

Estimate of Excess Mortality from Circulatory Diseases: The risk of diseases of the circulatory system is concentrated in older women, in those with a long duration of use, and in cigarette smokers.

A study of available data from a variety of sources concluded that the mortality associated with all methods of birth control is low and below that associated with childbirth, with the exception of oral contraceptives in women over 40 who smoke.

The risk of thromboembolic and thrombotic diseases associated with oral contraceptives increases with age after approximately age 30 and, for myocardial infarction, is further increased by hypertension, hypercholesterolemia, obesity, diabetes, or history of preeclamptic toxemia, and especially by cigarette smoking.

The physician and the patient should be alert to the earliest manifestations of thromboembolic and thrombotic disorders. Should any occur or be suspected, the drug should be discontinued immediately.

A fourfold to sixfold increased risk of postsurgery thromboembolic complications has been reported in users. If feasible, oral contraceptives should be discontinued at least four weeks before surgery of a type associated with an increased risk of thromboembolism or prolonged immobilization.

2. *Ocular Lesions.* Neuro-ocular lesions, such as optic neuritis or retinal thrombosis, have been associated with the use of oral contraceptives. Discontinue the oral contraceptive if there is unexplained sudden or gradual, partial, or complete loss of vision; onset of proptosis or diplopia; papilledema; or retinal vascular lesions.

3. *Carcinoma.* Long-term continuous administration of estrogen in certain animal species increases the frequency of carcinoma of the breast, cervix, vagina, and liver.

In humans, an increased risk of endometrial carcinoma associated with the prolonged use of exogenous estrogen in postmenopausal women has been reported. However, there is no evidence suggesting increased risk of endometrial cancer in users of conventional combination or progestogen-only oral contraceptives.

Studies found no evidence of increase in breast cancer in women taking oral contraceptives; however, an excess risk in users with documented benign breast disease was reported.

There is no confirmed evidence of an increased risk of cancer associated with oral contraceptives. Close clinical surveillance of users is, nevertheless, essential. In cases of undiagnosed persistent or recurrent abnormal vaginal bleeding, appropriate diagnostic measures should be taken to rule out malignancy. Women with a strong family history of breast cancer, or who have breast nodules, fibrocystic disease, or abnormal mammograms, should be monitored with particular care.

4. *Hepatic Tumors.* Benign hepatic adenomas have been found to be associated with oral contraceptives. Because hepatic adenomas may rupture and may cause death through intra-abdominal hemorrhage, they should be considered in women presenting abdominal pain and tenderness, abdominal mass, or shock.

A few cases of hepatocellular carcinoma have been reported in women taking oral contraceptives. The relationship of these drugs to this type of malignancy is not known at this time.

5. *Usage in or Immediately Preceding Pregnancy, Birth Defects in Offspring, and Malignancy in Female Offspring.* During early pregnancy, female sex hormones may seriously damage the offspring.

An increased risk of congenital anomalies, including heart defects and limb defects, has been reported with the use of oral contraceptives in pregnancy.

There is some evidence that triploidy and possible other types of polyploidy are increased among abortuses from women who become pregnant soon after ceasing oral contraceptives.

Pregnancy should be ruled out before continuing an oral contraceptive in any patient who has missed two consecutive menstrual periods. If the patient has not adhered to the schedule, the possibility of pregnancy should be considered at the time of the first missed period, and oral contraceptives should be withheld until pregnancy has been ruled out. If pregnancy is confirmed, the patient should be apprised of the potential risks to the fetus and the advisability of continuation of the pregnancy should be discussed.

Women who discontinue oral contraceptives with the intent of becoming pregnant should use an alternate form of contraception for a period of time before attempting to conceive.

Administration of progestogen-only or progestogen-estrogen combinations to induce withdrawal bleeding should not be used as a test of pregnancy.

6. *Gallbladder Disease.* Studies report an increased risk of surgically confirmed gallbladder disease in users of oral contraceptives.

7. *Carbohydrate and Lipid Metabolic Effects.* Because decreased glucose tolerance has been observed in a significant percentage of patients, prediabetic and diabetic patients should be carefully observed while receiving oral contraceptives.

An increase in triglycerides and total phospholipids has been observed.

8. *Elevated Blood Pressure.* An increase in blood pressure has been reported in patients receiving oral contraceptives. The prevalence in users increases with longer exposure. Age is also strongly correlated with development of hypertension. Women who previously have had hypertension during pregnancy may be more likely to develop elevation of blood pressure.

9. *Headache.* Onset or exacerbation of migraine or development of headache of a new pattern which is recurrent, persistent, or severe, requires discontinuation of oral contraceptives.

10. *Bleeding Irregularities.* Breakthrough bleeding, spotting, and amenorrhea are frequent reasons for patients discontinuing oral contraceptives. In breakthrough bleeding, nonfunctional causes should be borne in mind. In undiagnosed abnormal bleeding from the vagina, adequate diagnostic measures are indicated to rule out pregnancy or malignancy.

Women with a past history of oligomenorrhea or secondary amenorrhea, or young women without regular cycles should be advised that they may have a tendency to remain anovulatory or to become amenorrheic after discontinuation of oral contraceptives.

11. *Ectopic Pregnancy.* Ectopic as well as intrauterine pregnancy may occur in contraceptive failures.

12. *Breast-Feeding.* Oral contraceptives may interfere with lactation. Furthermore, a small fraction of the hormonal agents in oral contraceptives has been identified in the milk of mothers receiving these drugs.

PRECAUTIONS
1. A complete medical and family history should be taken prior to the initiation of oral contraceptives. The pretreatment and periodic physical examinations should include special reference to blood pressure, breasts, abdomen, and pelvic organs, including Papanicolaou smear and relevant laboratory tests. As a general rule, oral contraceptives should not be prescribed for longer than one year without another examination.
2. Preexisting uterine leiomyomata may increase in size.
3. Patients with a history of psychic depression should be carefully observed and the drug discontinued if depression recurs to a serious degree.
4. Oral contraceptives may cause fluid retention and should be prescribed with caution, and only with careful monitoring, in patients with conditions which might be aggravated.
5. Patients with a past history of jaundice during pregnancy have an increased risk of recurrence of jaundice. If jaundice develops, the medication should be discontinued.
6. Steroid hormones may be poorly metabolized and should be administered with caution in patients with impaired liver function.
7. Users may have disturbances in normal tryptophan metabolism, which may result in a relative pyridoxine deficiency.
8. Serum folate levels may be depressed.
9. The pathologist should be advised of oral contraceptive therapy when relevant specimens are submitted.
10. Certain endocrine and liver function tests and blood components may be affected. (a) Increased sulfobromophthalein retention. (b) Increased prothrombin and factors VII, VIII, IX, and X, decreased antithrombin 3; increased norepinephrine-induced platelet aggregability (c) Increased thyroid-binding globulin (TBG) leading to increased circulating total thyroid hormone (d) Decreased pregnanediol excretion. (e) Reduced response to metyrapone test.

Drug Interactions: Reduced efficacy and increased incidence of breakthrough bleeding have been associated with concomitant use of rifampin. A similar association has been suggested with barbiturates, phenylbutazone, phenytoin sodium, tetracycline, and ampicillin.

ADVERSE REACTIONS
An increased risk of the following serious adverse reactions has been associated with oral contraceptives: thrombophlebitis; pulmonary embolism; coronary thrombosis; cerebral thrombosis; cerebral hemorrhage; hypertension; gallbladder disease; benign hepatomas; congenital anomalies.

There is evidence of an association between the following conditions and the use of oral contraceptives, although additional confirmatory studies are needed: mesenteric thrombosis, neuro-ocular lesions, eg, retinal thrombosis and optic neuritis.

The following adverse reactions have been reported in patients receiving oral contraceptives and are believed to be drug related: nausea and/or vomiting, usually the most common adverse reactions, occur in approximately 10% or less of patients during the first cycle. Other reactions, as a general rule, are seen much less frequently or only occasionally: gastrointestinal symptoms; breakthrough bleeding; spotting; change in menstrual flow; dysmenorrhea; amenorrhea during and after treatment; temporary infertility after discontinuance of treatment; edema; chloasma or melasma; breast changes; change in weight; change in cervical erosion and cervical secretion; possible diminution in lactation when given immediately postpartum; cholestatic jaundice; migraine; increase in size of uterine leiomyomata; rash (allergic); mental depression; reduced tolerance to carbohydrates; vaginal candidiasis; change in corneal curvature; intolerance to contact lenses.

The following adverse reactions have been reported and the association has been neither confirmed nor refuted: premenstrual-like syndrome; cataracts; changes in libido; chorea; changes in appetite; cystitis-like syndrome; headache; nervousness; dizziness; hirsutism; loss of scalp hair; erythema multiforme; erythema nodosum; hemorrhagic eruption; vaginitis; porphyria.

Special Notes on Administration
Menstruation usually begins two or three days, but may begin as late as the fourth or fifth day, after discontinuing medication.

After several months on treatment, bleeding may be reduced to a point of virtual absence; reduced flow may be a result of medication and not indicative of pregnancy.

HOW SUPPLIED
Norlestrin 21 1/50 is available in compacts each containing 21 tablets. Each tablet contains 1 mg of norethindrone acetate and 50 mcg of ethinyl estradiol. Available in packages of five compacts and packages of five refills.

Norlestrin 21 2.5/50 is available in compacts each containing 21 tablets. Each tablet contains 2.5 mg of norethindrone acetate and 50 mcg of ethinyl estradiol. Available in packages of five compacts and packages of five refills.

Norlestrin Fe 1/50 is available in compacts each containing 21 yellow tablets and 7 brown tablets. Each yellow tablet contains 1 mg of norethindrone acetate and 50 mcg of ethinyl estradiol. Each brown tablet contains 75 mg of ferrous fumarate, USP. Available in packages of five compacts and packages of five refills.

Norlestrin FE 2.5/50 is available in compacts each containing 21 pink tablets and 7 brown tablets. Each pink tablet contains 2.5 mg of norethindrone acetate and 50 mcg of ethinyl estradiol. Each brown tablet contains 75 mg of ferrous fumarate, USP. Available in packages of five compacts and packages of five refills.

Norlestrin 28 1/50 is available in compacts each containing 21 yellow tablets and 7 white inert tablets. Each yellow tablet contains 1 mg of norethindrone acetate and 50 mcg of ethinyl estradiol. Available in packages of five compacts and packages of five refills.

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CHANGE: THE HALLMARK FOR 1984-85

S. WILLIAM CLARK, JR., M.D.

The following is the text of Dr. Clark's farewell address as President of the MAG to the House of Delegates last April in Savannah.

IT HAS BEEN my high privilege to serve as your president this past year. I want to thank the House again for affording me this high honor. Thanks are due to my wife, Sue, for her encouragement and support throughout the year and to my son, William, who has kept a practice together to which I can return on Monday. I have enjoyed representing you before many medical and non-medical groups. It has been rewarding to preside over meetings of your Executive Committee and to participate with its totally dedicated members in deliberations on your behalf.

While the job is fraught with awesome responsibility, the excellent support by the Executive Committee and staff has prevented this responsibility from becoming burdensome. All past presidents seem to agree that they would not take a million dollars for having had this experience, but I have noted none who would vote to have a 2-year term.

If I had to characterize the events of the past year in one word it would be that of "change." Permit me a few minutes to elaborate.

We began the year with a change in the Executive Director for our Association. Under the capable direction of Mike Fowler, the MAG is now run by a highly efficient and effective team of professionals and it is costing us less. Good business principles are applied everywhere. This became glaringly necessary during the year when our financial status *changed* from a situation of a healthy surplus, with money in the bank, to one of bare bones existence. This was brought about by prior actions of this House in repeatedly adopting budgets projecting more expenditures than expected revenues. This was fiscally irresponsible and should never happen again.

All past presidents seem to agree that they would not take a million dollars for having had this experience, but I have noted none who would vote to have a 2-year term.

A second change was that the committee structure of the MAG was reorganized under functional councils. The chairman of each council made up the first President's Cabinet, which met quarterly as directed, to plan and receive reports of all activities of the Association.

Believe it or not, there is change in sight in our discussions with the FTC. The past five presidents have started their year fully confident that this matter would be settled within the year. I was no exception. However, the investigation has finally been completed and forwarded to the full Commission. Dr. Bill Moore, our attorneys, and I have been to Washington twice within the past week to plead our case before the individual commissioners. Try as we did, it was impossible to have the Commission consider this matter at a formal session so that I could bring a final report to this House of Delegates meeting. As of now, our case will be heard before the full Commission (at which we are not allowed to be present) on April 29, 1985 — two days from now and as of that date, there will be a drastic change. Either we will be free of this burden or we will be faced with further prolonged litigation. I wish I could predict the outcome. At least President Carter knew as he returned to Plains that the hostages in Iran would be free in two days. *(Ed. Note: As of this printing, we have indeed been freed of the burden, and the FTC issue has finally been laid to rest.)*

One of the most dramatic changes facing us all as physicians is in the realm of our individual practices — where we live and work. The number of physicians in Georgia has changed from that of scarcity to, in many areas, one of over supply. This produces an increase in competition, and we are beginning to notice advertising by hospitals and by physicians. As numbers of physicians increase and as hospitals are faced with a host of emp-

His address is P.O. Box 2009, Waycross, GA 31501.

ty beds, we can expect competition to get stiffer, and we can expect more blatant advertising in the future.

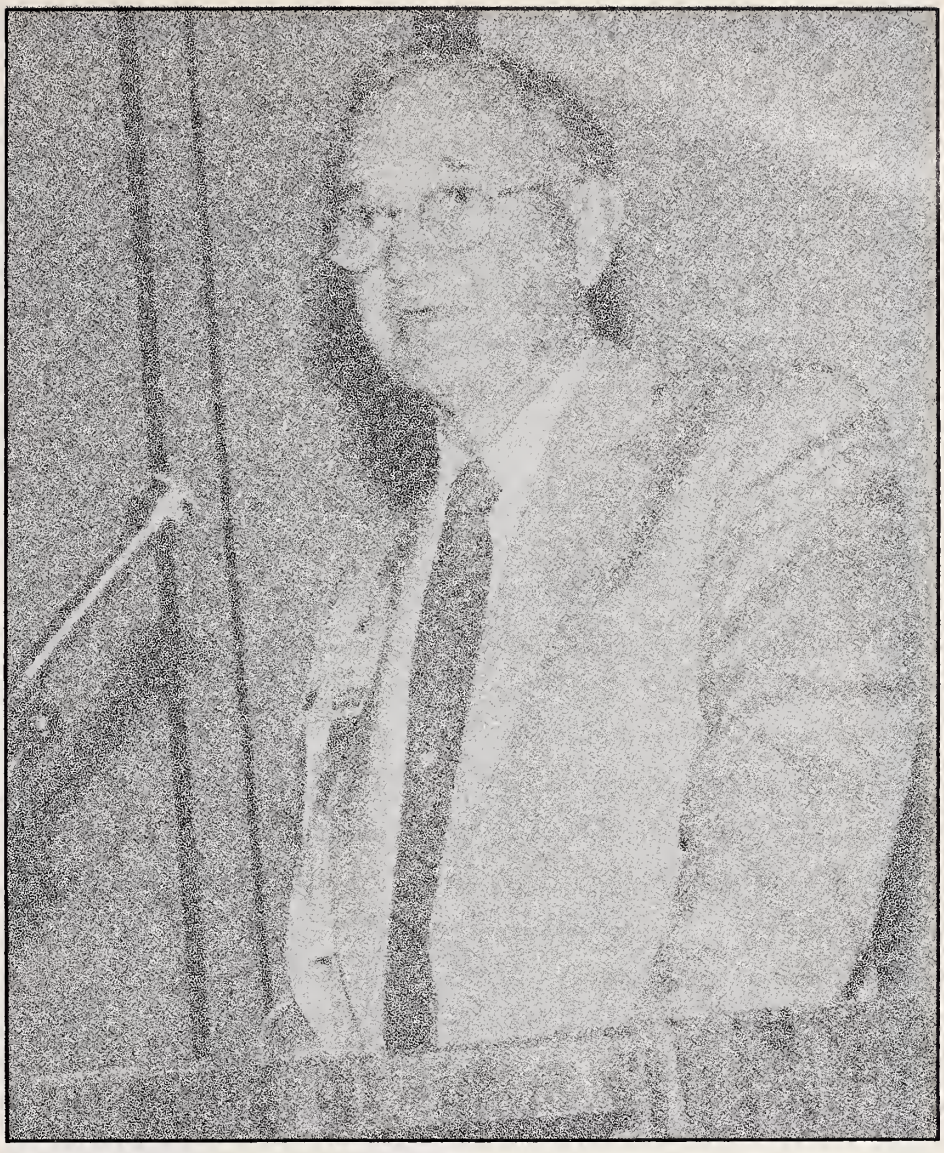
The government has changed its philosophy from one of access to "Cadillac Medicine" for everyone, to one of "We're not going to pay for it anymore."

The PRO in Georgia, administered by our own child, the Georgia Medical Care Foundation, has signed a government contract which looks impossible to fulfill. It certainly has changed the way I practice ophthalmology in Waycross from that of doing 100% of eye surgery as an in-patient procedure to that of doing 0% of eye surgery as an in-patient procedure. They're all out-patient now! Concern with the cost of medical care by all payors — for example, by individual patients, government, insurance companies, industry through insurance or by being self-employed — has spurred a rapid development of various alternative delivery systems in Georgia. HMOs, IPAs, PPOs are no longer abstract terms but are real and with us.

Consider the changes the Blue Cross-Blue Shield plans in Georgia went through just this year. In the fall, the Atlanta plan set up a PPO for the Metro Atlanta area. All participating doctors accepted a mandatory 10% discount of their fees along with strict control of their practices by a rigid protocol of peer review.

This House of Delegates has the unique opportunity to direct and control this change . . . by forming our own delivery system.

On January 1, 1985, the Blues in Georgia merged and within the past few weeks, the merged Blue plans in Georgia announced their intention to have a statewide HMO in place by July 1, 1985. Talk about *change!*



You can see that changes in the way we practice and the way we get paid for our services are coming whether we like them or not. As Alternative Delivery Systems spread all over Georgia, and as we contemplate inclusion in these systems of the massive population covered by government programs, it is frightening to contemplate the role of the physician if he is only a cog in the wheel or an assembly line worker for delivery systems which are owned and controlled by others. The key to any alternative delivery system is that he who enrolls the patient controls the patient. It is time for physicians to decide if they want to work for themselves or for somebody else. I would much rather trust my peers to give a fair shake at the bargaining table than any other group.

This House of Delegates has the unique opportunity to direct and control this change for the benefit of all our members and for future generations of physicians in our state. We can do this by forming our own delivery system.

As your President, I do not hesitate to recommend formation of the MAG IPA/HMO which was recommended by the ad hoc committee. However, it is your decision to make, and we all will be bound by this decision.

Whatever we decide during this session will not affect many of us in this room, because we're about out of it, but it will greatly affect those who come after us.

Now it is time for another change . . . that of leadership in this great organization. Our incoming president, Dr. William D. Logan, has a long and illustrious history of service to this organization. Under his dynamic and capable leadership we can expect great things next year. I have noted in the past few years a reluctance to pass this gavel on. Dub, I do so happily and with all our best wishes for you. God bless you. ■

During the heat of discussion at the October, 1984, Special Called Meeting of the MAG House of Delegates, I made an unsavory reference to the name Myrtle. Dr. Bev Sanders of Macon promptly chastised me for this, mentioning that his daughter was named Myrtle. As I recognized my error, it was obvious that a simple apology was not enough. I therefore composed a few lines which appear below in order to lessen my guilt and to honor the name Myrtle.

"ODE TO MYRTLE"

A Bard of yore
spoke of a rose, is a rose,
is a rose.
But I'm writing of a name,
that's not the same.
It evokes wide, wide
connotations.
Reaching from smell to touch,
to all the senses,
Including dreamy visitations.
It is not strange.
It is not new. In fact,
it's very, very old.
It's Myrtle!

Sweet fragrant shrubs bear this name
and thoughts of lilacs,
gardens, and games
are brought with tranquil visions.
Lovely lasses in gingham and lace,
and plaited tresses
all done with care
Bear this name with stately air.
They are dignity.
They are beauty
with praise and pride,
named — Myrtle.

There are others called Myrt and Myrtie
and cool, aloof Myrtice
but none compare
to the soft and rolling tones
following the sensuous kiss
when saying the beautiful,
the soft and lovely
The noble
name — Myrr . . . tlll.

There was the time of my grave error
When illustrating some frustration
with disdain,
A reference was made to this (name)
excluding all others.
Then colleagues shouted,
protesting my claim.
I'm very ashamed
To have wrongly proclaimed
The beautiful name
of Myrtle.

So know you all by these lines
of words and phrases
My captured soul expressing
stuttering sentences
How completely rectified are
my thoughts and mind
to past images and
remembrances.
Forget — I can never
Forgive me forever.
I shall always love
the name — Myrtle!

By: William D. Logan, Jr., M.D.

Roche salutes

GEORGIA MEDICINE TODAY



Munchausen's with a new twist

How do you simulate "asystolic intervals" during Holter monitoring? All it takes is a twist of the wrist, found Drs. C. Craig Mitchell and Martin J. Frank of the Medical College of Georgia.[1] A 24-year-old woman was referred to the cardiology service with ventricular premature beats, atypical chest pain and recurrent syncope. Medication appeared to control the arrhythmia, but repeated periods of monitoring showed frequent episodes of "asystole" with frequent bizarre "escape" beats.

After insertion of a permanent pacemaker, the "asystolic" episodes initially ceased but later recurred. Erratic patient behavior and close examination of the Holter strips suggested that the bradycardia was probably artifactual. While pseudobradycardia can be caused by component malfunction, the evidence pointed to patient tampering. A quick 20-degree rotation of the recording tape reel was found to produce similar ECG patterns.

This was probably the first reported case of apparent patient-induced pseudobradycardia during Holter monitoring, and it resulted in unnecessary insertion of a permanent pacemaker. Seal the record case, suggest Drs. Mitchell and Frank, if you're trying to prevent "electronic Munchausen's syndrome."

Cervical smoke screen

Cigarette smoking is significantly associated with dysplasia and carcinoma *in situ* of the uterine cervix, according to a case-control study headed by Dr. Edwin Trevathan[2] at Emory University. Among women who smoked, the relative risk of cervical cancer rose to 3.6. Even more alarmingly, the relative risk to women with 12 or more pack-years of exposure rose to 12.7. Further, there was evidence that women who began smoking as early teenagers faced even greater risk. It was hypothesized that the cervical mucosa might be exposed to carcinogens in cigarette smoke that are absorbed into the blood and then secreted by the epithelium.

A *JAMA* editorial comments: "As the Surgeon General's report notes, cigarette smoking is the single largest cause of disease and premature death in this country. We can now add cervical cancer to the list of tobacco-caused diseases."[3]

About "herbal" prednisone and indomethacin

Dr. Gary E. Myerson of Atlanta reports a herbal medication called *chuifong toukuwan,* ordered by mail from Hong Kong, that was used by rheumatoid arthritis patients and caused conditions ranging from acute flares, lesions and Cushingoid appearance to arrhythmias and depression.[4] Three samples analyzed at Georgia Tech were found to contain prednisone and indomethacin, and one included a high concentration of lead. As they say in Georgia, *caveat emptor.*

References: 1. Mitchell CC, Frank MJ: *JAMA 248*:469-470, Jul 23/30, 1982. **2.** Trevathan E, *et al: JAMA 250*:499-502, Jul 22/29, 1983. **3.** Austin DF: *JAMA 250*:516-517, Jul 22/29, 1983. **4.** Medical News. *JAMA 248*:623, Aug 13, 1982.

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Anticholinergic: Disturbance of accommodation, paralytic ileus, urinary retention, dilatation of urinary tract.
Allergic: Skin rash, urticoria, photosensitization, edema of face and tongue, pruritus.
Hematologic: Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia.
Gastrointestinal: Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, black tongue.
Endocrine: Testicular swelling and gynecomastia in the male, breast enlargement, galactorrhea and minor menstrual irregularities in the female, elevation and lowering of blood sugar levels, and syndrome of inappropriate ADH (antidiuretic hormone) secretion.
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PRURITIC URTICARIAL PAPULES AND PLAQUES OF PREGNANCY

JOSEPH A. HILL, M.D.

A benign and usually self-limiting disease.

Abstract

There are 29 reported cases in the literature of pruritic urticarial papules and plaques in pregnancy. This dermatosis, in contrast to other pruritic eruptions occurring in pregnancy, is self-limiting and generally seen in the primigravida during the third trimester. Clinical manifestations are erythematous urticarial papules and plaques which begin centrally and are intensely pruritic. The history is nonspecific, and treatment is toward symptomatic relief.

The differential diagnosis and management of pregnancy-associated dermatoses are discussed. A possible immunogenetic etiology is suggested.

Lawley and associates[1] separate from pregnancy-associated dermatoses a clinically distinct entity called "pruritic urticarial papules and placques of pregnancy (PUPPP)." There are 29 cases of PUPPP reported in the English literature.[1-6] In contrast to other papular dermatoses of pregnancy, PUPPP, although intensely pruritic, is a benign and usually self-limiting disease whose etiology and pathophysiology are unknown. PUPPP are important eruptions for obstetricians to recognize. Patients with this disease are concerned about associated maternal and fetal risks, the course of the disease, and possibility of recurrence in subsequent pregnancies.

Case Report

An 18-year-old white female primigravida (S.B. 303-363) presented in the 40th week of her pregnancy. One week prior to the visit, she noticed small red bumps on the central portion of her abdomen. Over the next several days, they spread to involve the thighs, buttocks, and chest wall. Hive-like lesions also began to appear. She complained of intense pruritus. She was not on any medications and had no history of previous rashes, sickness, medical problems, or hospitalizations. There was no personal or family history of atopy. Her pregnancy had progressed normally with the exception of monilial vaginitis which was diagnosed and successfully treated during her first trimester of pregnancy. On examination, the lesions were present on the abdomen, thighs, buttocks, anterior chest wall, back, arms, and forearms. The face, scalp, mucous membranes, palms, and soles were spared. Her hair and nails were without abnormality. There were no excoriations, crusting, lymphadenopathy, scabious burrows, or hemorrhagic lesions. The majority of the lesions were small (1-3mm.), erythematous, dome-shaped papules without a halo effect. Urticarial plaques were also present. A complete blood count with differential white count, urinalysis, and SMA-18 including liver function tests were normal. The possibility that the eruption was an id reaction to her monilial infection was not considered likely because of the successful treatment of her vaginitis in the first trimester, the lack of facial, palm, or sole involvement, and the clinical absence of vesicles. The patient was advised to take Oilated Aveeno baths frequently to control itching and to use Cetaphil with ¼% menthol as needed. She took Chlortremiton 8mg. three times a day, for relief of pruritus. Two weeks later, the patient had a normal vaginal delivery after pitocin induc-

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tion for post-dates. The placenta was normal. The female infant had normal skin and was without anomaly.

The rash began to fade by 3 days postpartum and was completely resolved by her 6-week postpartum visit. She has been followed for 6 months postpartum and has no recurrence of her lesions. She was having normal menstrual periods.

Discussion

The incidence of PUPPP is unknown but is believed to occur more frequently than reported.[5] This dermatosis is clinically distinct from previously reported pruritic eruptions seen during pregnancy.[1] It is a benign, self-limiting disease occurring in the third trimester and generally only in the first pregnancy (25 of the 30 reported cases were primigravida).

PUPPP is not associated with either fetal loss or maternal sequelae.

It does not appear to have a prodrome, to be related to an infection, or to be a drug eruption.[6] The clinical manifestations include erythematous urticarial papules and plaques that initially appear in the striae distensae. They spread over the abdomen and thighs to involve the buttocks, back, chest, and extremities. The lesions are often intensely pruritic; however, excoriations are surprisingly infrequent.[8] Papulovesicles are rarely seen.[3] Bullae are notably absent. The mucous membranes, face, hair, scalp, nails, soles, and palms are not involved. There are no associated systemic complaints. Laboratory investigation including hormonal analysis are within normal limits for gestation. Both direct and indirect immunofluorescence of histologic biopsy specimens are negative.

In contrast to other papular dermatoses of pregnancy, PUPPP, although intensely pruritic, is a benign and usually self-limiting disease whose etiology and pathophysiology are unknown.

PUPPP is not associated with either fetal loss or maternal sequelae. Clinical newborn involvement has been reported; however, the authors were unable to exclude the possibility that the lesions were caused by herpes gestationis.[4] There is no association between PUPPP and the sex of the newborn. All of the 30 reported cases were Caucasian. Five of these 30 patients have had subsequent pregnancies without recurrence of the disease.[2, 7]

The histologic findings are nonspecific and may be confused with those found in superficial gyrate erythema, viral exanthema, urticarial allergic eruptions, or a superficial response to an insect bite. Lawley and associates[1] noted either of two histologic patterns: 1) a superficial perivascular lymphohistiocytic infiltrate with focal spongiosis, parakeratosis or scale in the overlying dermis; or 2) a superficial and mild dermal perivascular infiltrate with a variable number of eosinophils and edema with a normal overlying epidermis. Another patient was reported to have spongiosis associated with vesicle formation.[3] These papulovesicles are believed to be a pathologic extension of the more severe forms of this disease.

Differential Diagnosis

The clinical differentiation between PUPPP and other pregnancy-associated dermatoses is important. There are differences in maternal and fetal risks, course of the disease, and the possibility of recurrence in subsequent pregnancies. The differential diagnosis of pregnancy-associated dermatoses is given in Table 1. The differentiation between PUPPP and other pregnancy-associated dermatoses can be done clinically without special laboratory or histologic determinations. Prurigo gravidarum and toxemic rash of pregnancy occur, like PUPPP, only during the third trimester of pregnancy. Prurigo gravidarum, also known as intrahepatic cholestasis of pregnancy, is characterized by pruritus occasionally associated with jaundice. Liver function tests are invariably abnormal.[7] The toxemic rash is similar in origin, distribution, and symptoms to PUPPP except that urticarial eruptions are not

Table I — Differential Diagnosis of Pregnancy-Associated Dermatoses

Pruritic urticarial papules and plaques of pregnancy (PUPPP)
Pruritis gravidarum (intrahepatic cholestasis of pregnancy)
Toxemic rash of pregnancy
Pruritis gestationis of Besnier
Papular dermatitis of pregnancy
Impetigo herpetiformis (pustular psoriasis)
Herpes gestationis

seen in toxemic rash and crusts are more commonly seen in this dermatosis.[8] The histopathologic differences are unknown, because the histology of toxemic rash has never been reported. The other four dermatoses, unlike PUPPP, may occur at any time during pregnancy. The eruptions of prurigo gestationis of Besnier consist of excoriated papules without urticaria and are confined to the extensor surfaces of the extremities. Papular dermatitis of pregnancy is associated with increased fetal mortality and recurrences in subsequent pregnancies.[10] It can be differentiated from PUPPP clinically by the presence of excoriated facial papules. The lesions in papular dermatitis will not respond to topical agents and must be treated with systemic corticosteroids. The PUPPP lesions respond very well to topical agents. Human chorionic gonadotropin is also grossly elevated in the serum of women with papular dermatitis of pregnancy. Impetigo herpetiformis, or pustular psoriasis as it is sometimes called, may also occur any time during pregnancy, often with serious systemic toxic effects.[10] Herpes gestationis can be differentiated from PUPPP clinically, histologically, and with immunofluorescence. The lesions of this disease consist of vesicles and bullae. Immunoglobulin and complement deposits are seen along the basement membrane zone of lesional and perilesional skin.[12] There is an increased maternal morbidity and both increased fetal morbidity and mortality associated with Herpes gestationis.[13]

The differential diagnosis and management of pregnancy-associated dermatoses are discussed.

The treatment of PUPPP is directed toward symptomatic relief.[5] Most patients respond to topical therapy with steroid creams, emollients, baths, and oral antihistamines. There is a rapid decrease in pruritus followed by a slower resolution of the eruptions.[1-6] A few patients may require oral corticosteroids.[1-6] PUPPP may resolve prior to or with delivery.

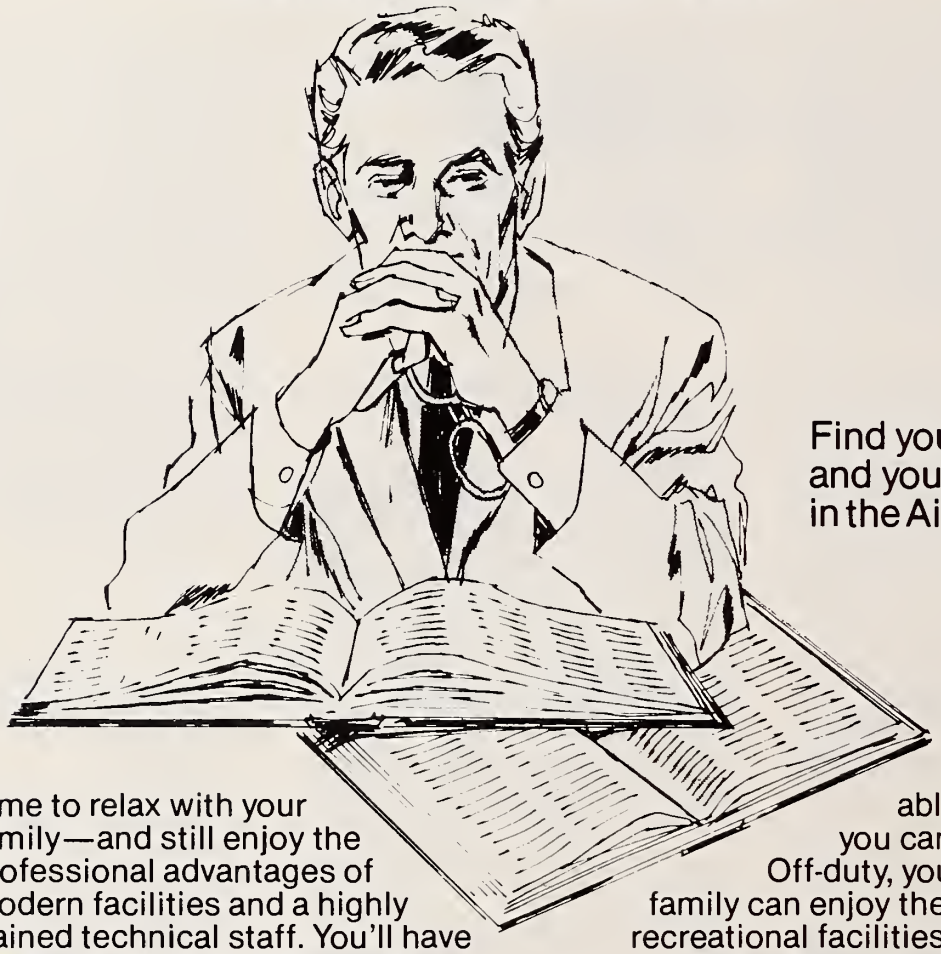
PUPPP cases and larger series need reporting so that additional information may be determined on possible pathologic mechanisms.[5] Even though direct and indirect immunofluorescence of histologic biopsy specimens are negative, there may be some as yet unidentified immunogenetic aberration in these women, since PUPPP is usually a disease of the primigravida. Whether the five multigravidas with PUPPP had the same or different sexual partners for their previous unaffected pregnancies is not known. If they had different partners, then this would lend credence to an immunogenetic factor in the etiology of PUPPP.

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THROMBOTIC THROMBOCYTOPENIC PURPURA ASSOCIATED WITH SMALL CELL LUNG CARCINOMA

MARCIA G. RILEY, M.D., AND NANCY W. STEAD, M.D.

A case with favorable response to plasmapheresis.

Introduction

Moschowitz described thrombotic thrombocytopenic purpura (TTP) in 1925.[1] His original criteria — hemolytic anemia, thrombocytopenia, and neurologic disease — have been expanded to include fever and renal abnormalities. The illness is usually fulminant, although chronic recurrent forms occur.

Ninety percent of individuals with TTP are previously healthy.[2-4] Conditions antedating the onset of TTP in the remainder include pregnancy, connective tissue disease, drug administration, or infective endocarditis. Less than 10 cases with associated neoplasms appear in the literature; tumors include Hodgkins disease, non-Hodgkins lymphoma, acute leukemia, and cholangiocarcinoma.[5, 6] This report describes a patient in whom TTP occurred during the remission of small cell carcinoma of the lung and in whom there was improvement with plasmapheresis.

Case Report

Eleven months before the onset of thrombocytopenia, a 61-year-old man was started on therapy for small cell carcinoma of the lung. At presentation, he reported malaise and an increase in his chronic cough, both of 1 month duration. Examination revealed normal vital signs, absence of peripheral adenopathy, and normal liver span. Breath sounds were diminished at the base of the right lung. Neurologic examination revealed an alert, oriented patient who had decreased strength of the right ankle flexors. Laboratory evaluation included a hemoglobin of 7.9 gm%, white count 7300/mm^3 with a normal differential white count, and platelet count 199,000/mm^3. Liver functions were normal with the exception of an albumin of 2.9 gm%. Chest roentgenogram showed multiple densities in the right hilum and right lower lobe atelectasis. Neither bone scan nor cranial CT scan showed metastatic foci. Tissue diagnosis was obtained by bronchoscopy from the right lung.

Therapy for small cell carcinoma was begun with cyclophosphamide 500 mg/meter^2, doxorubicin 20 mg/meter^2, and vincristine 2 mg (CAV) alternating with lomustine 70 mg/meter^2 day 1, methotrexate 40 mg/meter^2 day 1 and day 22, and cyclophosphamide 500 mg/meter^2 day 1 and day 22 (CMC). CAV was given weeks 1, 4, 13, 18, 26, and 32; CMC was given weeks 7, 10, 21, and 29. In addition, 3000 rads irradiation was administered to the primary lesion on weeks 21 and 22 and 3000 rads to the cranium prophylactically on weeks 37 and 38. Restaging, including bronchoscopy after completion of therapy (week 40), showed a complete remission.

At the patient's scheduled appoint-

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At the patient's scheduled appointment on week 48, his family reported the new onset of lethargy, anorexia, and intermittent dysarthria. Examination showed him to be afebrile and to have lost 17 pounds in the preceding 2 months. No palpable adenopathy or hepatosplenomegaly was detected. Neurologic examination showed cognitive dysfunction without new peripheral or cranial sensory or motor deficits. Laboratory data included a hemoglobin of 5.8 gm%, white count of 7100/mm^3 with a normal differential count and a platelet count of 15,000/mm^3. Reticulocyte count was 13.4%; the peripheral blood film showed polychromasia and many schistocytes. There was protein in the urine. Liver function studies included alkaline phosphatase of 66 mU/ml, serum glutamic pyruvic transaminase of 26 mU/ml, lactic dehydrogenase 850 mU/ml, and bilirubin of 1.9 mg%. Coagulation studies included normal prothrombin time, partial thromboplastin time, fibrinogen, thrombin time, and fibrin split products. Chest roentgenogram, bone scan, liver-spleen scan, and bone marrow biopsy were all negative for recurrent tumor.

The clinical findings were compatible with TTP; biopsy of buccal mucosa and bone marrow showed no characteristic vascular lesions. Transfusion of packed red cells did not correct anemia. Schistocytes persisted in the blood film. Thrombocytopenia was unchanged, as were coagulation values. On the 6th hospital day, prednisone 80 mg was added to his treatment regimen. On the 14th hospital day, the patient underwent the first of seven 3-liter plasmaphereses. Aspirin 300 mg bid and dipyridamole 50 mg qid were also begun. Prednisone was tapered from the 20th hospital day. Subsequent to the second plasmapheresis, the patient's mental status improved dramatically. Concomitantly, the hemoglobin rose to 9.5 gm% and the platelet count to 80,000/mm^3; bilirubin fell to 2.2 mg% and lactic dehydrogenase to 380 mU/ml. Hematologic values remained stable until discharge; serum chemistries normalized by the 18th day. He was discharged on the 31st hospital day (week 53) on aspirin 300 mg bid, dipyridamole 50 mg qid, and weekly plasmapheresis.

The syndrome of TTP is one of multiple organ dysfunction secondary to widespread intravascular occlusions.

The following week he was stable clinically, but the hemoglobin had fallen to 7.4 gm% and the platelet count to 21,000/mm^3. Despite plasmapheresis, progressively abnormal mental status caused him to present for his second hospitalization during week 55. Admission physical examination, hematologic values, and serum chemistries were similar to those at the time of the prior admission. Prednisone was added, and he was stabilized with four plasmaphereses; on the 19th hospital day, he underwent splenectomy. Vascular lesions of TTP were not seen. Dramatic improvement in the patient's mental status followed splenectomy; his hemoglobin rose to 11 gm% and platelet count to ~100,000/mm^3 without plasmapheresis. He was discharged on week 58. For the next 7 weeks he was well with hemoglobin >11 gm% and platelet count >150,000/mm^3.

On the 64th week of illness, he was hospitalized with increasing lethargy and new symptomatology of chills, fever, and diarrhea. Examination revealed a temperature of 38.7°C and findings of percussion dullness and rales in the left lower lung field. Chest roentgenogram showed a lower left lobe infiltrate. The clinical impression was that the patient suffered from sepsis. Blood cultures subsequently grew *E. coli*. The patient died and permission for an autopsy was not granted.

Discussion

The syndrome of TTP is one of multiple organ dysfunction secondary to widespread intravascular occlusions. The histologic lesion is a hyaline thrombus located in precapillary arterioles of multiple organs; venules are spared.[7, 8] Hyaline material accumulates segmentally beneath the endothelium and the media.[7] Involved arterioles show endothelial cell proliferation and aneurysmal dilatation.[9] Inflammatory reaction around involved arterioles is absent.[7, 8] Although at autopsy, organ sparing is the exception, not the rule, biopsy during life is positive only 50% of the time.[3, 9] The corollary of these data is that the clinical syndrome is sufficient for the diagnosis of TTP and institution of therapy. Gingival and bone marrow biopsies were non-diagnostic in this patient.

As late as the mid 1970s, the mortality of TTP was 70%.

Bukowski[4] proposed that the coexistence of thrombocytopenia (<75,000 platelets/mm^3), microangiopathic hemolytic anemia, and neurologic symptoms in the presence of at least two of the four following features (fever >101° C, moderate renal abnormality, microthrombi in tissue biopsy, or normal soluble coagulation screen) be criteria for diagnosis of TTP. These criteria evolve from the features of the clinical syndrome. Sixty percent of patients present with neurologic dysfunction and an additional 30% of patients develop these symptoms during the evolution of the illness. Symptoms characteristically fluctuate in severity. Deficits may be focal motor or sensory lesions or the headache, lethargy, and confusion of diffuse cerebral dysfunction; fever, which is present in >90% of

TTP patients, may be of central nervous system origin. Renal disease occurs less commonly; as many as 30% of patients have objective evidence of involvement which ranges from proteinuria or hematuria to moderate azotemia with serum creatinine <3.0 mg%. Symptoms of organ dysfunction do not always parallel the degree of anatomic disease; although clinical organ dysfunction is rare, the most numerous autopsy lesions are pancreatic, adrenal, and myocardial.[9, 10]

All patients present with thrombocytopenia and microangiopathic hemolytic anemia. The median hemoglobin is 7-8 gm%; the platelet count is <40,000/mm^3. The peripheral blood film shows schistocytes and burr cells of a microangoipathic process, polychromasia of hemolysis with reticulocytosis, and few platelets. Serum indirect bilirubin level of 2.0-3.0 mg% and lactic dehydrogenase > two times normal result from hemolysis. The patient in this report satisfied the criteria of Bukowski.

Although the pathogenesis of TTP is unknown and may be multiple, the pathophysiology is understood. Thrombi are amorphous hyaline when examined by haematoxylin and eosin stain. However, immunofluorescent stains of thrombi support platelet origin of these lesions. All authors demonstrate intralesional fibrin which is the most intensely staining antigen.[5, 11-14] Only two of five studies showed immunologic demonstration of platelet antigens, although Feldman was able to find platelet antigens in 5/5 patients studied by ultrastructural techniques. Since 10% of platelet protein is fibrinogen, this antigen can derive from platelet, not plasma, fibrinogen. TTP is not disseminated intravascular coagulation (DIC). Our patient exhibited the expected coagulation studies. Eighty percent of patients have normal coagulation studies, including prothrombin time, partial thromboplastin time, fibrinogen level, and no fibrin split products.[3, 15] Turnover of radiolabeled fibrinogen is normal in patients with TTP[16, 17] and shortened in patients with DIC. Autopsy study of organs from patients with DIC show infrequent thrombotic lesions which contrasts with TTP. Although DIC is not the rule in patients with TTP, 10% of the patients do have coagulation studies diagnostic of that process. Jaffe, et al[15] proposed that proteases released from hemolyzed erythrocytes trigger DIC in this minority of patients.

Since platelet consumption is a primary event in TTP, investigational studies have focused on isolation of a serum factor which may cause platelet aggregation/agglutination. Immune complexes can damage endothelial cells with secondary platelet aggregation,[19] or they can promote platelet aggregation primarily.[20]

The most effective single modality therapies are antiplatelet agents, plasma infusion, and plasmapheresis.

Although immune complexes are in the sera of patients with lupus or infective endocarditis,[21] some of whom develop TTP, they have been demonstrated in the sera of only one patient with idiopathic TTP.[22] In that patient, clearance of immune complexes correlated with clinical improvement.[22] Antiendothelial antibodies could promote vascular damage with secondary platelet aggregation. Wall and Harker[23] and Foster, et al[24] demonstrated in vitro endothelial cell cytotoxicity of 10/12 TTP sera studied, but Weisenberg found it in 0/3 patients studied.[25] Lian demonstrated a platelet aggregating factor (PAF) in the plasma of a patient with symptomatic TTP.[26, 27] Activity of PAF required neither the cyclooxygenase pathway nor thrombin; aspirin, sulfinpyrazone, apyrase, prostacyclin, hirudin, and heparin did not inhibit PAF. Incubation with normal plasma did abolish activity. The PAF is not present in all patients with TTP, nor is it specific for TTP. Lian did find it in 20 of 30 patients studied, but Brandt found it in several patients with thrombocytopenia of other etiologies.[28] Whether PAF is an abnormal aggregating/agglutinating substance or a normal substance uncovered by the absence of a plasma inhibitor is not known.

The report of Remuzzi, et al[29] of prostacyclin deficiency in hemolytic uremic syndrome (HUS), a childhood illness similar to TTP, was followed by investigation of additional patients. Both patients with TTP or HUS have been studied. In 7/7 in whom it was measured, plasma levels of prostaglandin Flα, a prostacylin metabolite, were decreased or undetectable; *in vitro* prostacyclin synthesis by human endothelial cells cultured from vessel wall biopsies was decreased or absent in 6/6 patients. And in 5/6 patients studied, plasma of symptomatic patients inhibited prostacyclin synthesis by rabbit aortic endothelial cells.[4]

As late as the mid 1970s, the mortality of TTP was 70%.[30] Initial antithrombotic therapies included heparin, pharmacologic corticosteroid therapy, and splenectomy. The response to heparin was <10%[4, 32]; it confirms that DIC is not a dominant process in TTP. Corticosteroids alone had a response rate of only 10%. Splenectomy as an isolated intervention cannot be evaluated, because patients received perioperative blood products. Prostacyclin infusion has not been effective.[31]

The most effective single modality therapies are antiplatelet agents, plasma infusion, and plasmapheresis.[4, 32-36] The rationale for these therapies evolves from studies of pathophysiology of the illness. When case reports and small groups of patients are averaged, each modality effects a 50% complete response; plasmapheresis combined with antiplatelet drugs is as high as 80%.[36]

Current treatment combines plasmapheresis, antiplatelet drugs, and perhaps pharmacologic doses of corticosteroids; splenectomy is performed only rarely. Plasmapheresis of 35-40 milliliters/kilogram is done daily or every other day until the platelet count is >100,000/mm^3; replacement fluid is fresh frozen plasma.[36] Aspirin 600 mg twice daily and dipyridamole 200-400 mg daily in divided doses are the usual antiplatelet drugs. Mortality is < 30%.

Although the pathogenesis of TTP is unknown and may be multiple, the pathophysiology is understood.

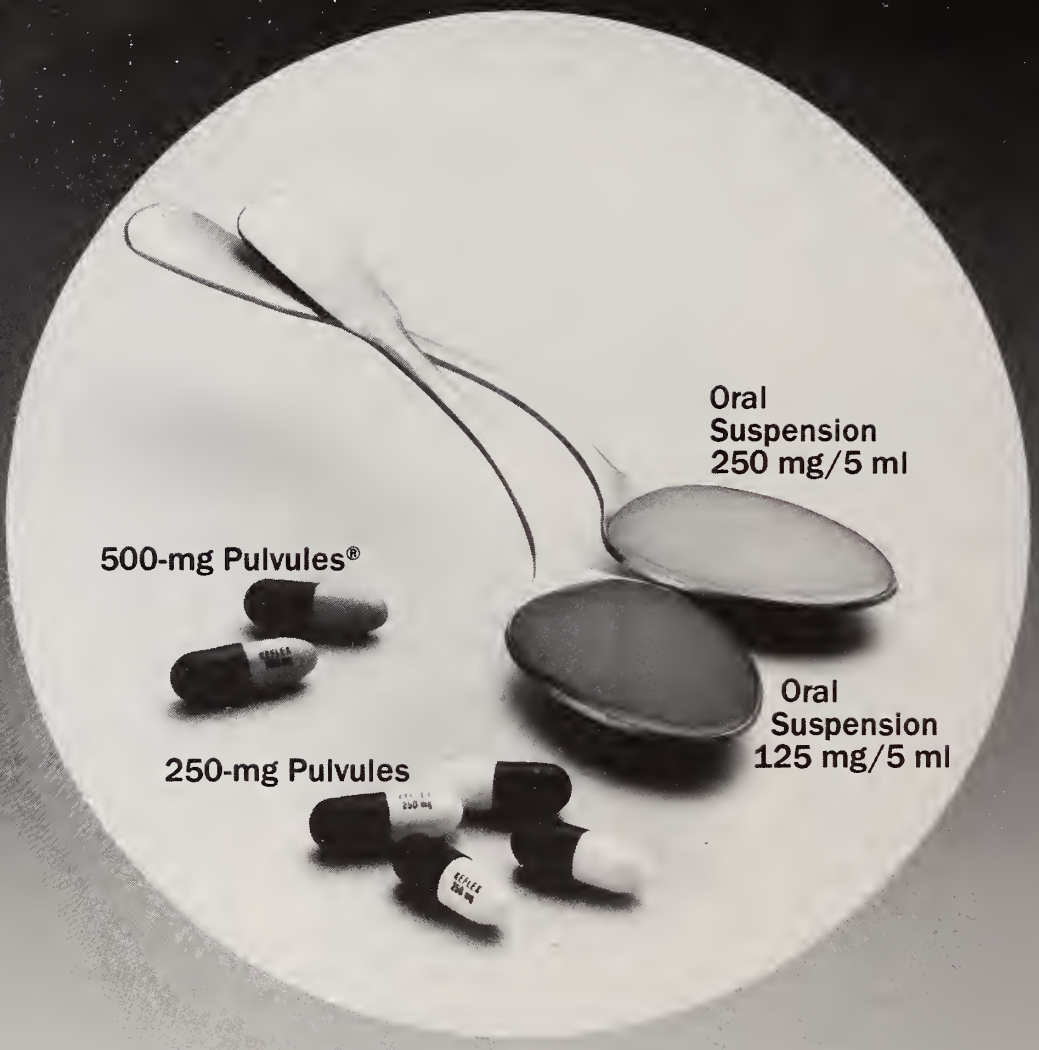
Development of TTP in patients with malignancy has been described in 18 patients since 1983.[37-41] Tumor burden at the time of TTP was minimal or undetectable in 9/12 patients.[37, 38, 41] The possibility of chemotherapeutic agents being the etiologic agent(s) has been suggested, but the number of possible medications is becoming large; the first agent was mitomycin C, but cis-platinum and bleomycin have been implicated. Cantrell, et al[39] measured immune complexes in 8/8 patients studied; the antibodies reacted with gastric or colonic mucosa, not mitomycin C, the antineoplastic agent implicated in his patients. The syndrome differs from the classic one in that neurologic dysfunction is minimal or absent. The dominant symptoms are thrombocytopenia, microangiopathic hemolytic anemia, and renal insufficiency/failure. Twelve of 18 patients died; plasmapheresis was not effective in the 11 who underwent it, since ten died.

The patient in this case report is different from the recently described patients with secondary TTP in association with malignancy. His syndrome was classic, with neurologic manifestations being prominent. His response to current therapy — plasmapheresis, antiplatelet drugs plus or minus corticosteriods — was unequivocal; splenectomy effected long-term control.

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DIAGNOSIS OF SUBARACHNOID HEMORRHAGE

JAMES H. WOOD, M.D.

Early diagnosis is critical to improve patient outcome.

Abstract

Although 50% of subarachnoid hemorrhage patients die at the time of the initial bleed, most survivors have a good outcome, provided rebleeding can be prevented. Heightened physician awareness will enable prompt diagnosis which is crucial to the early definitive intervention necessary to minimize rebleeding and maximize survival. Refinement of computed tomography, cerebrospinal fluid analysis, and cerebral angiography contribute greatly to the accuracy of diagnosis, may aid in prognostication of outcome, and enable the reduction of patient morbidity.

Introduction

UNFORTUNATELY, most patients with subarachnoid hemorrhage (SAH) die before receiving definitive treatment, and many have previously presented to their local physician or emergency room with mild symptoms prior to their major bleed. Heightened awareness of the possibility of "warning leaks" enables prompt diagnosis and protocol initiation as well as allows the opportunity for earlier definitive intervention with improved patient outcome.

The purpose of this paper is to discuss the accuracy of diagnosis and the predicators of outcome of SAH. The management of patients with ruptured intracranial aneurysms and arteriovenous malformations (AVMs) are the topics of separate reviews.[1, 2]

Background

The death rate from SAH in the United States is approximately 16/100,000 population. The major causes of SAH are listed in Table 1. Generally, intracranial aneurysms and AVMs account for 51% and 6%, respectively, of SAHs.[3] Although 50% of patients die at the time of the initial ictus, early diagnosis and treatment are crucial. Among the survivors, there is a 25% mortality rate at 1 week, a 50% rate at 2 months and a 70% rate at 5 years.[4] These mortality figures reflect both those patients who died as the result of the initial SAH and those who had recurrent hemorrhage. The cumulative mortality rate for the recurrence of SAH has been found to be 24% at one month, 34% at 2 months and 38% at 1 year.[4] With respect to morbidity determined 1 year following the ictus, 72% of survivors are well, 11% are partially disabled, 11% are totally disabled, and 6% are disabled from unrelated causes.[4] Thus, most survivors of the initial SAH have good outcomes provided rebleeding can be prevented.

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Clinical Presentation

The signs and symptoms of SAH are related to the nature and severity of the bleeding. Milder bleeding episodes might cause only moderate headache and a stiff neck after which the patient may present to his local physician or emergency room for analgesics. Characteristically, patients having a major SAH present with a severe headache of sudden onset, temporary clouding of consciousness (50% actually lose consciousness at the ictus), nausea and vomiting, nuchal rigidity, photophobia, and transient focal neurologic deficits. Bleeding into the hemisphere may produce coma, ipsilateral third nerve palsy, and contralateral hemiparesis suggesting transtentorial her-

Table 1 — Causes of Subarachnoid Hemorrhage

A. Common Causes
   1. Traumatic subarachnoid hemorrhage
   2. Spontaneous subarachnoid hemorrhage
      a. Intracerebral hemorrhage with rupture into the subarachnoid space
      b. Primary subarachnoid hemorrhage
         1. Ruptured berry aneurysm
         2. Bleeding arteriovenous malformation
         3. Ruptured mycotic aneurysm
B. Rare Causes
   1. Developmental defects including pseudoxanthoma elasticum, Ehlers-Danlos syndrome, Sturge-Weber disease, hereditary hemorrhagic telangiectasia, telangiectasia pontis
   2. Infections: *Herpes simplex* encephalitis, acute hemorrhagic leukoencephalitis, brain abscess, tuberculous meningitis, syphilitic vasculitis
   3. Neoplasm: Primary or metastatic brain tumor. Hemangioblastoma of the cerebellum or brainstem
   4. Blood dyscrasias: Leukemia, Hodgkin's disease, thrombocytopenia, sickle cell anemia, hemophilia, aplastic anemia, pernicious anemia
   5. Vasculitis: Polyarteritis nodosa, anaphylactic purpura
   6. Arteriosclerosis: Rupture of an arteriosclerotic vessel
   7. Iatrogenic: Anticoagulant therapy

From Gilroy and Holliday,[19] with permission.

niation. The signs and symptoms specifically indicating a diagnosis of intracranial aneurysm or AVM are discussed in separate reviews.[1, 2]

Diagnostic Evaluation

Computed Tomography

Patients suspected of having SAH should undergo emergency cranial computed tomography (CT) to identify the presence of blood in the subarachnoid space, localize the hemorrhage, and detect the presence of intracerebral hematomas or ventricular dilation.[5] High-resolution CT scanning is approximately 95% accurate in detecting SAH if performed within 5 days of the ictus.[6] However, CT scanning is unreliable if delayed more than 7 days following the hemorrhage. Smaller amounts of SAH can be recognized more easily if the hemorrhage lies perpendicular to the CT plane in the interhemispheric fissure, sylvian fissure, perimesencephalic cisterns, and deep cerebral sulci (Figure 1).[5] Uncontrasted CT may also reveal cerebral anomalies with calcification suggesting developmental defects or AVMs. Importantly, CT may also reveal an associated intracerebral hematoma, midline shift, skull trauma, and cerebral edema.

Administration of intravenous contrasts enables CT visualization of the aneurysm in about 30% of cases.[7] This relatively low sensitivity of aneurysm detection is caused by the density of the SAH surrounding the aneurysm and small aneurysm size. Contrasted CT scanning is also useful in excluding some of the usual causes of SAH, such as hemorrhage into tumor or suppurative process, as well as in visualizing AVMs.

The meningeal irritation from the subarachnoid blood develops over the first 2-3 weeks after the ictus and produces meningeal hyperemia which is visualized as increased enhancement of the subarachnoid space. This enhancement is presumed to be secondary to increased vascular permeability associated with arachnoiditis and allows the correct diagnosis of SAH in the absence of cisternal blood on the precontrast scans in approximately 33-50% of patients after SAH.[8] This meningeal enhancement is associated with an increased incidence of hydrocephalus but does not correlate with clinical grade, arterial spasm, or location of the bleed.[8]

Clinical correlations have been found between the extent of SAH as visualized on CT and the propensity to develop cerebral vasospasm.[9] The amount and distribution of blood on CT also appears to be related to the neurologic status of the patient.[10]

Acutely, within the first 2 weeks after the ictus, hydrocephalus develops in approximately 12% of patients with SAH.[11] The presence of marked amounts of subarachnoid blood, especially if extending into the ventricular system, suggests that communicating hydrocephalus may develop later. Delayed symptomatic hyrocephalus occurs in approximately 7% of cases and requires shunting.[11] CT evidence of hydrocephalus includes ventricular enlargement, periventricular hypodensity suggesting transependymal absorption of CSF from the ventricles into the cerebral substance, ballooning of the frontal horns, and dilatation of the temporal horns.[5]

Lumbar Puncture and Cerebrospinal Fluid Analysis

Approximately 9% of patients with spontaneous SAH, and especially those with cerebral shifts, deteriorate after lumbar puncture.[12] Thus, lumbar puncture, if necessary, should be avoided until a CT scan has been done.[13]

Approximately 100 erythrocytes per cubic millimeter of cerebrospinal fluid (CSF) has been suggested to be diagnostic of clinical SAH.[14] The number of erythrocytes in lumbar CSF does not always correlate with that contained in the intracranial subarachnoid CSF. The CSF will be uni-

formly bloodstained or pink to red in the majority of symptomatic patients at the time of the initial puncture. Gross evidence of bleeding may disappear within 24 hours, but usually persists for 7 to 14 days. If the CSF is bloody, the specimen should be centrifuged and the supernatant immediately examined for the presence of color.

Since the decision to proceed with cerebral angiography, an invasive study, may depend upon the results of the lumbar puncture, differentiation of traumatic from atraumatic SAH is clinically important (Table 2).[13] Traumatic punctures will be associated with a decline in the number of erythrocytes as more CSF is serially drained from the spinal needle, and the proportion of leukocytes to erythrocytes will be similar to that in blood.[14] Crenated erythrocytes, if present, do not indicate an early bleeding episode. After CSF centrifugation, if the supernatant exhibits yellow discoloration (xanthochromia), true SAH likely antedated the puncture. However, caution should be exercised in this interpretation, since three other conditions may cause xanthochromia: (1) Protein content exceeding 150 mg/dl may tinge CSF. (2) Higher erythrocyte contamination (greater than 1,500,000 per cubic millimeter) may be associated with discoloration of CSF secondary to the plasma component of the contaminated blood. (3) Lastly, necrotic tissue causing high lipid levels in CSF may yield xanthochromia. Traumatic lumbar puncture is usually indicated if a clot forms in the specimen vial when the erythrocyte count exceeds 200,000 per cubic millimeter. Bleeding from any source will elevate CSF protein content approximately 1 mg per 1000 erythrocytes. If the actual total CSF level exceeds the sum of the calculated protein elevation an the upper limit of normal CSF protein, then true SAH has likely occurred. The presence of CSF leukocytosis, e.g., leukocyte/erythrocyte ratios greater than that in blood (more than 2 leukocytes/1000 erythrocytes) dates the SAH to at least 24 hours before CSF sampling.[17]

Major morbidity from subarachnoid hemorrhage is secondary to its medical management.

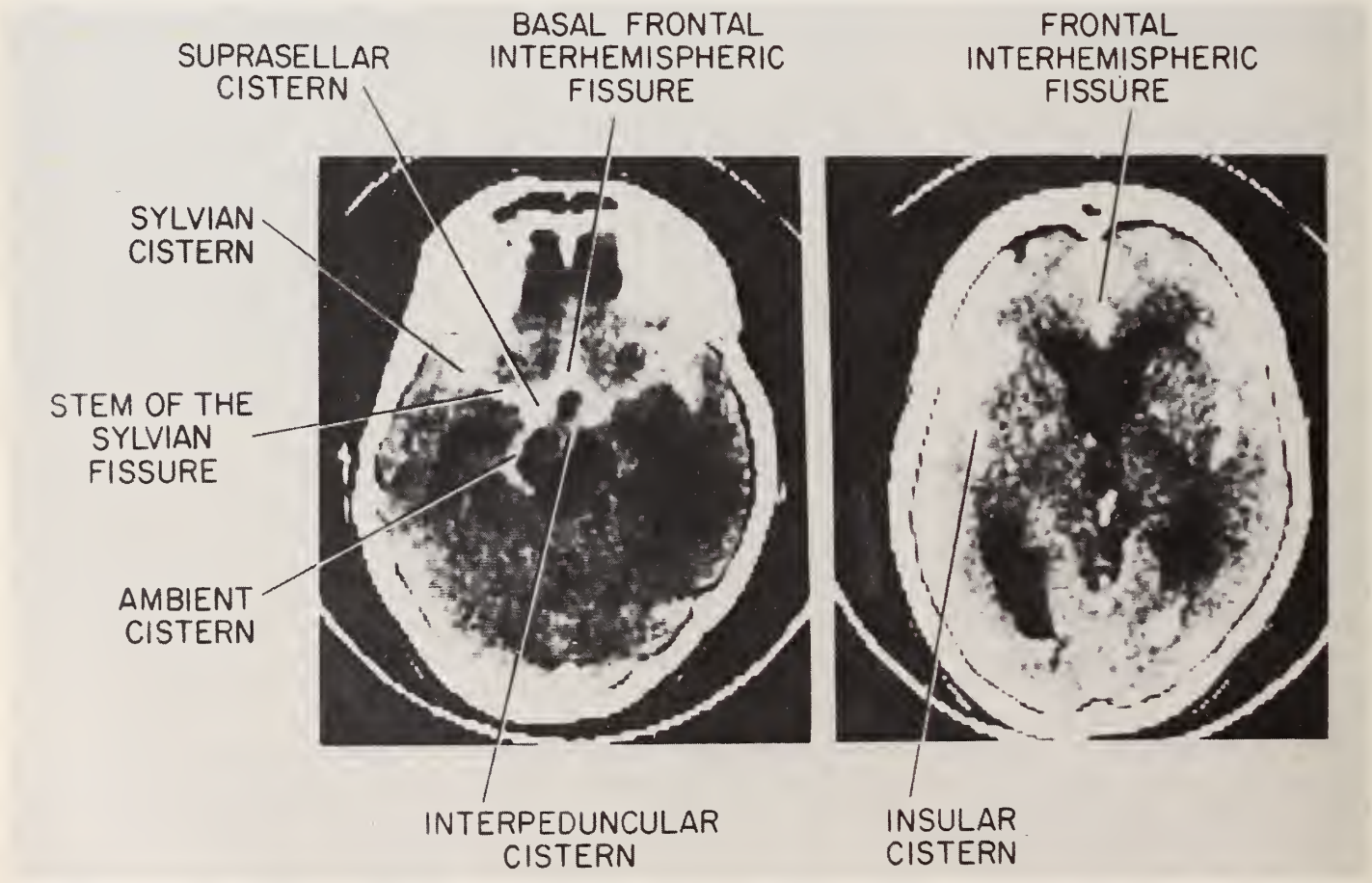


Figure 1: Cranial computed tomographs (CT) without intravenous contrast administration of patient with subarachnoid hemorrhage. Note that blood is more easily visualized in cerebrospinal fluid spaces which are almost perpendicular to plane of scan such as interhemispheric fissure, perimesencephalic cisterns, and sylvian fissures. Both intraventricular blood and ventricular dilation are also visualized by CT. (From Kistler et al,[18] *with permission.)*

Xanthochromia is produced by the pigmented degradation products of hemoglobin that are released during erythrocyte lysis. Xanthochromia appears in the CSF supernatant within 2 hours after SAH in a few cases, within 6 hours in 70% of cases, and within 12 hours in 90% of cases after the onset of clinical symptoms.[14]

In addition to elevated protein concentrations, the glucose levels in CSF following SAH may be reduced, especially in patients having a CSF leukocytosis. The CSF pressure may be elevated above the 240 mg Hg, considered to be the upper limit of normal.[13]

Angiography

Four-vessel cerebral angiography is the definitive procedure of choice and should be scheduled for the next working day. Because of the need to institute the preoperative aneurysm protocol,[1] including the administration of antifibrinolytic agents, intracranial aneurysm as the cause for this SAH should be excluded as soon as possible. The possibility of a concommitant bleeding diathesis should be eliminated by coagulation studies prior to angiography. Four-vessel angiography is required to assess the entire intracranial circulation to exclude the possibility of multiple vascular anomalies. In addition to anteroposterior and lateral views, diagnosis may infrequently require oblique or submental views.[18] Ipsilateral external carotid angiography should be performed if an AVM is found, since dural vascular contribution to the AVM is visualized in 27% of cases.[2]

Patients suspected of having SAH should undergo emergency cranial CT to identify the presence of blood in the subarachnoid space, localize the hemorrhage, and detect the presence of intracerebral hematomas or ventricular dilation.[5]

An accuracy of 89-96% has been reported for cerebral angiography in the detection of intracranial aneurysms.[15] Older reviews have found that angiography fails to identify the source of SAH in approximately 20% of patients;[3] however, more recent studies employing magnification and subtraction techniques have demonstrated normal angiograms in only 7%.[16] Although nonvisualization of the cerebral aneurysm probably represents the most common explanation for the normal angiogram, the false-negative rate is less than 2% on repeat panangiography,[17] thus repeat panangiography is seldom justified unless further bleeding episodes occur.[16, 17]

Further Medical Evaluation

If these neuroradiologic studies have not demonstrated a cause for the SAH, then the rare causes of SAH listed in Table 1 should be investigated. Most of these medical etiologies, such as infections, blood dyscrasias, and vasculitis, are treatable.

Summary

In order for more patients with SAH to benefit from improved operative techniques, SAH must be sus-

Table 2. CSF Alterations in Cerebrovascular Disorders

Disorder	*Appearance*	*WBCs/mm³*	*Protein*	*Comments*
Traumatic puncture	Streaked, clearing No xanthocromia	2WBCs/1000 RBCs	1 mg/1000 RBCs	Crenated RBCs not significant
Subarachnoid hemorrhage	Bloody, 90% Xanthochromia in less than 12 hr	Initially proportional to RBCs Leukocytosis in 24-48 hrs	Initially proportional to RBCs Increased by 24-48 hrs	Oxyhemoglobin and bilirubin content determined spectrophotometrically
Intracerebral hemorrhage	Bloody, Xanthochromia	Initially proportional to RBCs Leukocytosis in 48-72 hrs Confirmation with CT scan	Increased	None
Cerebral thrombosis	Normal	Normal, increased in 30% Leukocytosis in 48-72 hrs	Normal, increased in 40%	Hemorrhagic infarction may produced bloody CSF
Subdural hematoma	Normal, bloody brain is lacerated	Normal	May increase	Methemoglobin may be present in CSF

Abbreviations: (RBCs) erythrocytes; (WBCs) leukocytes; (CSF) cerebrospinal fluid; (CT) computed tomography
From Laurant,[14] with permission

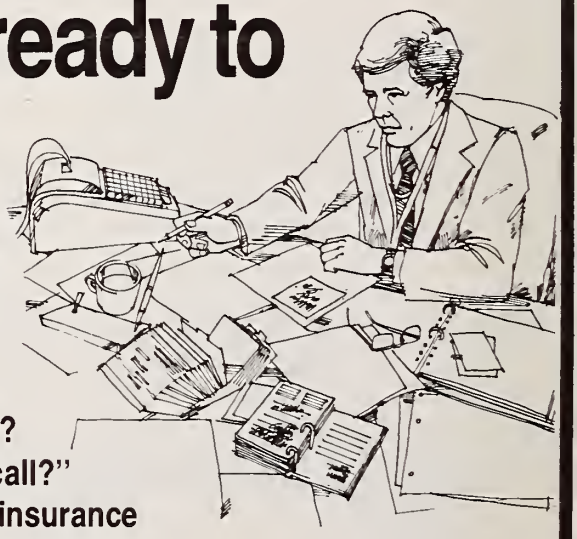
pected and diagnosed earlier so as to minimize the incidence of rebleeding. The refinements of computed tomography, CSF analysis, and cerebral angiography discussed in this review aid in the accuracy of physician diagnosis, the prognostication of outcome, and the reduction of patient morbidity.

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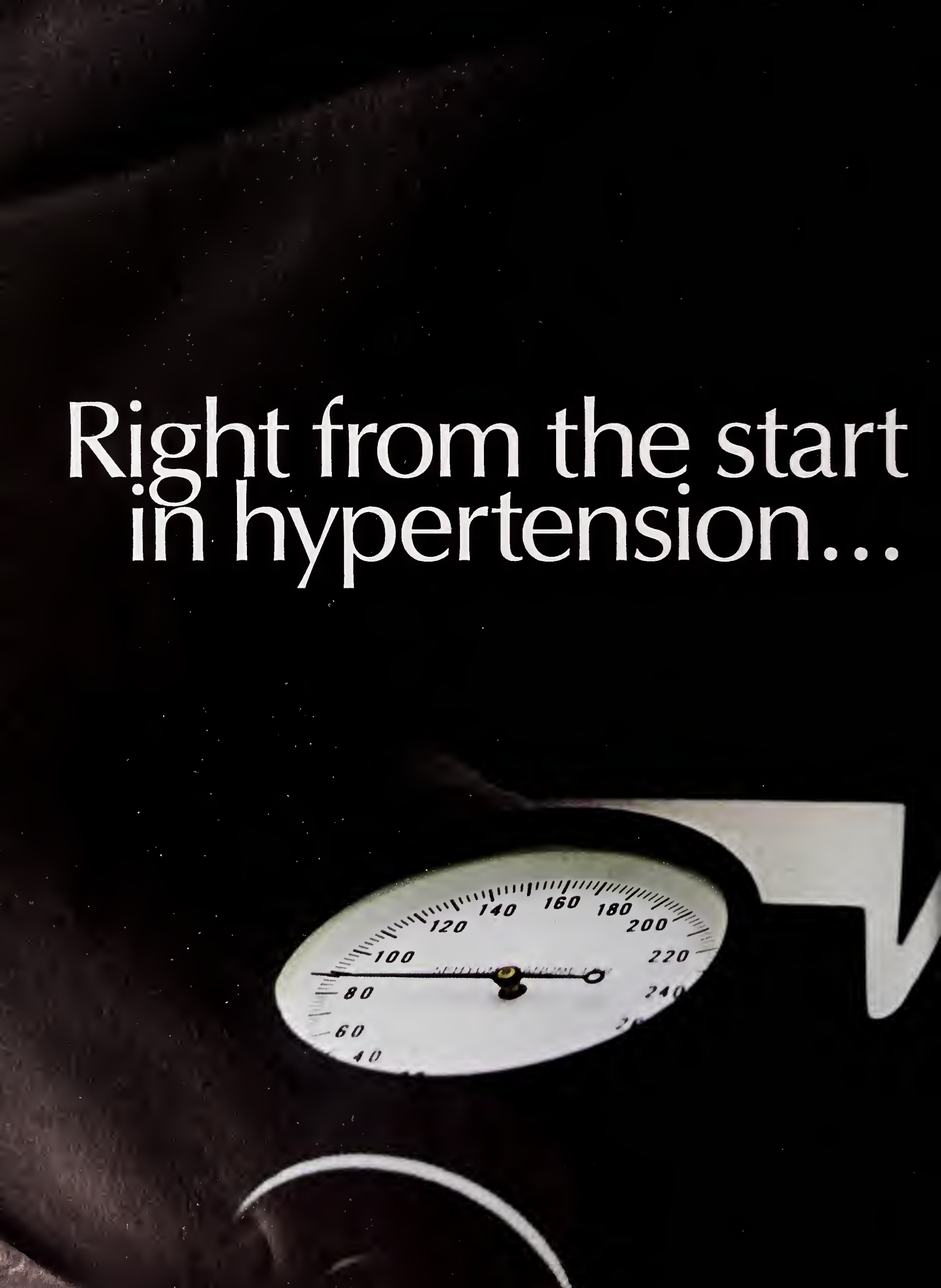
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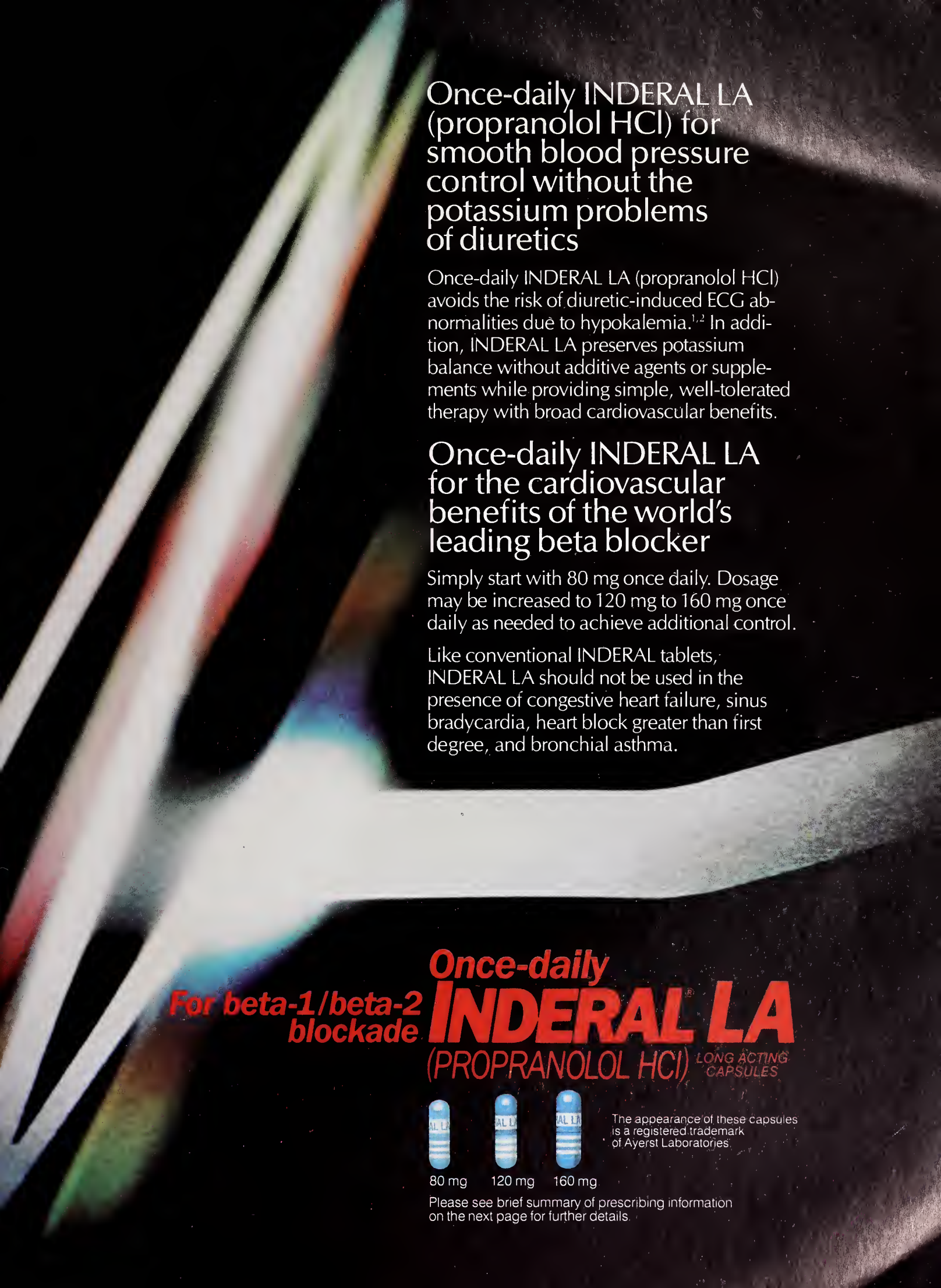
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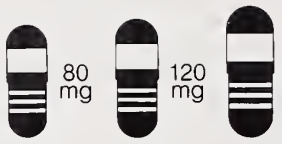
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BRIEF SUMMARY *(FOR FULL PRESCRIBING INFORMATION, SEE PACKAGE CIRCULAR.)*
INDERAL® LA brand of propranolol hydrochloride **(Long Acting Capsules)**
DESCRIPTION. Inderal LA is formulated to provide a sustained release of propranolol hydrochloride. Inderal LA is available as 80 mg, 120 mg, and 160 mg capsules.
CLINICAL PHARMACOLOGY. INDERAL is a nonselective beta-adrenergic receptor blocking agent possessing no other autonomic nervous system activity. It specifically competes with beta-adrenergic receptor stimulating agents for available receptor sites. When access to beta-receptor sites is blocked by INDERAL, the chronotropic, inotropic, and vasodilator responses to beta-adrenergic stimulation are decreased proportionately.

INDERAL LA Capsules (80, 120, and 160 mg) release propranolol HCl at a controlled and predictable rate. Peak blood levels following dosing with INDERAL LA occur at about 6 hours and the apparent plasma half-life is about 10 hours. When measured at steady state over a 24-hour period the areas under the propranolol plasma concentration-time curve (AUCs) for the capsules are approximately 60% to 65% of the AUCs for a comparable divided daily dose of INDERAL tablets. The lower AUCs for the capsules are due to greater hepatic metabolism of propranolol, resulting from the slower rate of absorption of propranolol. Over a twenty-four (24) hour period, blood levels are fairly constant for about twelve (12) hours then decline exponentially.

INDERAL LA should not be considered a simple mg for mg substitute for conventional propranolol and the blood levels achieved do not match (are lower than) those of two to four times daily dosing with the same dose. When changing to INDERAL LA from conventional propranolol, a possible need for retitration upwards should be considered especially to maintain effectiveness at the end of the dosing interval. In most clinical settings, however, such as hypertension or angina where there is little correlation between plasma levels and clinical effect, INDERAL LA has been therapeutically equivalent to the same mg dose of conventional INDERAL as assessed by 24-hour effects on blood pressure and on 24-hour exercise responses of heart rate, systolic pressure and rate pressure product. INDERAL LA can provide effective beta blockade for a 24-hour period.

The mechanism of the antihypertensive effect of INDERAL has not been established. Among the factors that may be involved in contributing to the antihypertensive action are (1) decreased cardiac output, (2) inhibition of renin release by the kidneys, and (3) diminution of tonic sympathetic nerve outflow from vasomotor centers in the brain. Although total peripheral resistance may increase initially, it readjusts to or below the pretreatment level with chronic use. Effects on plasma volume appear to be minor and somewhat variable. INDERAL has been shown to cause a small increase in serum potassium concentration when used in the treatment of hypertensive patients.

In angina pectoris, propranolol generally reduces the oxygen requirement of the heart at any given level of effort by blocking the catecholamine-induced increases in the heart rate, systolic blood pressure, and the velocity and extent of myocardial contraction. Propranolol may increase oxygen requirements by increasing left ventricular fiber length, end diastolic pressure and systolic ejection period. The net physiologic effect of beta-adrenergic blockade is usually advantageous and is manifested during exercise by delayed onset of pain and increased work capacity.

In dosages greater than required for beta blockade, INDERAL also exerts a quinidine-like or anesthetic-like membrane action which affects the cardiac action potential. The significance of the membrane action in the treatment of arrhythmias is uncertain.

The mechanism of the antimigraine effect of propranolol has not been established. Beta-adrenergic receptors have been demonstrated in the pial vessels of the brain.

Beta receptor blockade can be useful in conditions in which, because of pathologic or functional changes, sympathetic activity is detrimental to the patient. But there are also situations in which sympathetic stimulation is vital. For example, in patients with severely damaged hearts, adequate ventricular function is maintained by virtue of sympathetic drive which should be preserved. In the presence of AV block, greater than first degree, beta blockade may prevent the necessary facilitating effect of sympathetic activity on conduction. Beta blockade results in bronchial constriction by interfering with adrenergic bronchodilator activity which should be preserved in patients subject to bronchospasm.

Propranolol is not significantly dialyzable.
INDICATIONS AND USAGE. Hypertension: INDERAL LA is indicated in the management of hypertension; it may be used alone or used in combination with other antihypertensive agents, particularly a thiazide diuretic. INDERAL LA is not indicated in the management of hypertensive emergencies.

Angina Pectoris Due to Coronary Atherosclerosis: INDERAL LA is indicated for the long-term management of patients with angina pectoris.

Migraine: INDERAL LA is indicated for the prophylaxis of common migraine headache. The efficacy of propranolol in the treatment of a migraine attack that has started has not been established and propranolol is not indicated for such use.

Hypertrophic Subaortic Stenosis: INDERAL LA is useful in the management of hypertrophic subaortic stenosis, especially for treatment of exertional or other stress-induced angina, palpitations, and syncope. INDERAL LA also improves exercise performance. The effectiveness of propranolol hydrochloride in this disease appears to be due to a reduction of the elevated outflow pressure gradient which is exacerbated by beta-receptor stimulation. Clinical improvement may be temporary.
CONTRAINDICATIONS. INDERAL is contraindicated in 1) cardiogenic shock; 2) sinus bradycardia and greater than first degree block; 3) bronchial asthma; 4) congestive heart failure (see WARNINGS) unless the failure is secondary to a tachyarrhythmia treatable with INDERAL.
WARNINGS. CARDIAC FAILURE: Sympathetic stimulation may be a vital component supporting circulatory function in patients with congestive heart failure, and its inhibition by beta blockade may precipitate more severe failure. Although beta blockers should be avoided in overt congestive heart failure, if necessary, they can be used with close follow-up in patients with a history of failure who are well compensated and are receiving digitalis and diuretics. Beta-adrenergic blocking agents do not abolish the inotropic action of digitalis on heart muscle.

IN PATIENTS WITHOUT A HISTORY OF HEART FAILURE, continued use of beta blockers can, in some cases, lead to cardiac failure. Therefore, at the first sign or symptom of heart failure, the patient should be digitalized and/or treated with diuretics, and the response observed closely, or INDERAL should be discontinued (gradually, if possible).

IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following abrupt discontinuance of INDERAL therapy. Therefore, when discontinuance of INDERAL is planned the dosage should be gradually reduced over at least a few weeks, and the patient should be cautioned against interruption or cessation of therapy without the physician's advice. If INDERAL therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute INDERAL therapy and take other measures appropriate for the management of unstable angina pectoris. Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease who are given propranolol for other indications.

Nonallergic Bronchospasm (e.g., chronic bronchitis, emphysema)— PATIENTS WITH BRONCHOSPASTIC DISEASES SHOULD IN GENERAL NOT RECEIVE BETA BLOCKERS. INDERAL should be administered with caution since it may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta receptors.

MAJOR SURGERY: The necessity or desirability of withdrawal of beta-blocking therapy prior to major surgery is controversial. It should be noted, however, that the impaired ability of the heart to respond to reflex adrenergic stimuli may augment the risks of general anesthesia and surgical procedures.

INDERAL (propranolol HCl), like other beta blockers, is a competitive inhibitor of beta-receptor agonists and its effects can be reversed by administration of such agents, e.g., dobutamine or isoproterenol. However, such patients may be subject to protracted severe hypotension. Difficulty in starting and maintaining the heartbeat has also been reported with beta blockers.

DIABETES AND HYPOGLYCEMIA: Beta-adrenergic blockade may prevent the appearance of certain premonitory signs and symptoms (pulse rate and pressure changes) of acute hyooglycemia in labile insulin-dependent diabetes. In these patients, it may be more difficult to adjust the dosage of insulin.

THYROTOXICOSIS: Beta blockade may mask certain clinical signs of hyperthyroidism. Therefore, abrupt withdrawal of propranolol may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm. Propranolol does not distort thyroid function tests.

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker. In one case this resulted after an initial dose of 5 mg propranolol.
PRECAUTIONS. *General:* Propranolol should be used with caution in patients with impaired hepatic or renal function. INDERAL (propranolol HCl) is not indicated for the treatment of hypertensive emergencies.

Beta adrenoreceptor blockade can cause reduction of intraocular pressure. Patients should be told that INDERAL may interfere with the glaucoma screening test. Withdrawal may lead to a return of increased intraocular pressure.

Clinical Laboratory Tests: Elevated blood urea levels in patients with severe heart disease, elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase.

DRUG INTERACTIONS: Patients receiving catecholamine-depleting drugs such as reserpine should be closely observed if INDERAL is administered. The added catecholamine-blocking action may produce an excessive reduction of resting sympathetic nervous activity which may result in hypotension, marked bradycardia, vertigo, syncopal attacks, or orthostatic hypotension.

Carcinogenesis, Mutagenesis, Impairment of Fertility: Long-term studies in animals have been conducted to evaluate toxic effects and carcinogenic potential. In 18-month studies in both rats and mice, employing doses up to 150 mg/kg/day, there was no evidence of significant drug-induced toxicity. There were no drug-related tumorigenic effects at any of the dosage levels. Reproductive studies in animals did not show any impairment of fertility that was attributable to the drug.

Pregnancy: Pregnancy Category C. INDERAL has been shown to be embryotoxic in animal studies at doses about 10 times greater than the maximum recommended human dose.

There are no adequate and well-controlled studies in pregnant women. INDERAL should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers: INDERAL is excreted in human milk. Caution should be exercised when INDERAL is administered to a nursing woman.

Pediatric Use: Safety and effectiveness in children have not been established.
ADVERSE REACTIONS. Most adverse effects have been mild and transient and have rarely required the withdrawal of therapy.

Cardiovascular: bradycardia; congestive heart failure; intensification of AV block; hypotension; paresthesia of hands; thrombocytopenic purpura; arterial insufficiency, usually of the Raynaud type.

Central Nervous System: lightheadedness; mental depression manifested by insomnia, lassitude, weakness, fatigue; reversible mental depression progressing to catatonia; visual disturbances; hallucinations; an acute reversible syndrome characterized by disorientation for time and place, short-term memory loss, emotional lability, slightly clouded sensorium, and decreased performance on neuropsychometrics.

Gastrointestinal: nausea, vomiting, epigastric distress, abdominal cramping, diarrhea, constipation, mesenteric arterial thrombosis, ischemic colitis.

Allergic: pharyngitis and agranulocytosis, erythematous rash, fever combined with aching and sore throat, laryngospasm and respiratory distress.

Respiratory: bronchospasm.

Hematologic: agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpura.

Auto-Immune: In extremely rare instances, systemic lupus erythematosus has been reported.

Miscellaneous: alopecia, LE-like reactions, psoriasiform rashes, dry eyes, male impotence, and Peyronie's disease have been reported rarely. Oculomucocutaneous reactions involving the skin, serous membranes and conjunctivae reported for a beta blocker (practolol) have not been associated with propranolol.
DOSAGE AND ADMINISTRATION. INDERAL LA provides propranolol hydrochloride in a sustained-release capsule for administration once daily. If patients are switched from INDERAL tablets to INDERAL LA capsules, care should be taken to assure that the desired therapeutic effect is maintained. INDERAL LA should not be considered a simple mg for mg substitute for INDERAL. INDERAL LA has different kinetics and produces lower blood levels. Retitration may be necessary especially to maintain effectiveness at the end of the 24-hour dosing interval.

HYPERTENSION—*Dosage must be individualized.* The usual initial dosage is 80 mg INDERAL LA once daily, whether used alone or added to a diuretic. The dosage may be increased to 120 mg once daily or higher until adequate blood pressure control is achieved. The usual maintenance dosage is 120 to 160 mg once daily. In some instances a dosage of 640 mg may be required. The time needed for full hypertensive response to a given dosage is variable and may range from a few days to several weeks.

ANGINA PECTORIS—*Dosage must be individualized.* Starting with 80 mg INDERAL LA once daily, dosage should be gradually increased at three to seven day intervals until optimum response is obtained. Although individual patients may respond at any dosage level, the average optimum dosage appears to be 160 mg once daily. In angina pectoris, the value and safety of dosage exceeding 320 mg per day have not been established.

If treatment is to be discontinued, reduce dosage gradually over a period of a few weeks (see WARNINGS).

MIGRAINE—*Dosage must be individualized.* The initial oral dose is 80 mg INDERAL LA once daily. The usual effective dose range is 160-240 mg once daily. The dosage may be increased gradually to achieve optimum migraine prophylaxis. If a satisfactory response is not obtained within four to six weeks after reaching the maximum dose, INDERAL LA therapy should be discontinued. It may be advisable to withdraw the drug gradually over a period of several weeks.

HYPERTROPHIC SUBAORTIC STENOSIS—80-160 mg INDERAL LA once daily.

PEDIATRIC DOSAGE—At this time the data on the use of the drug in this age group are too limited to permit adequate directions for use.

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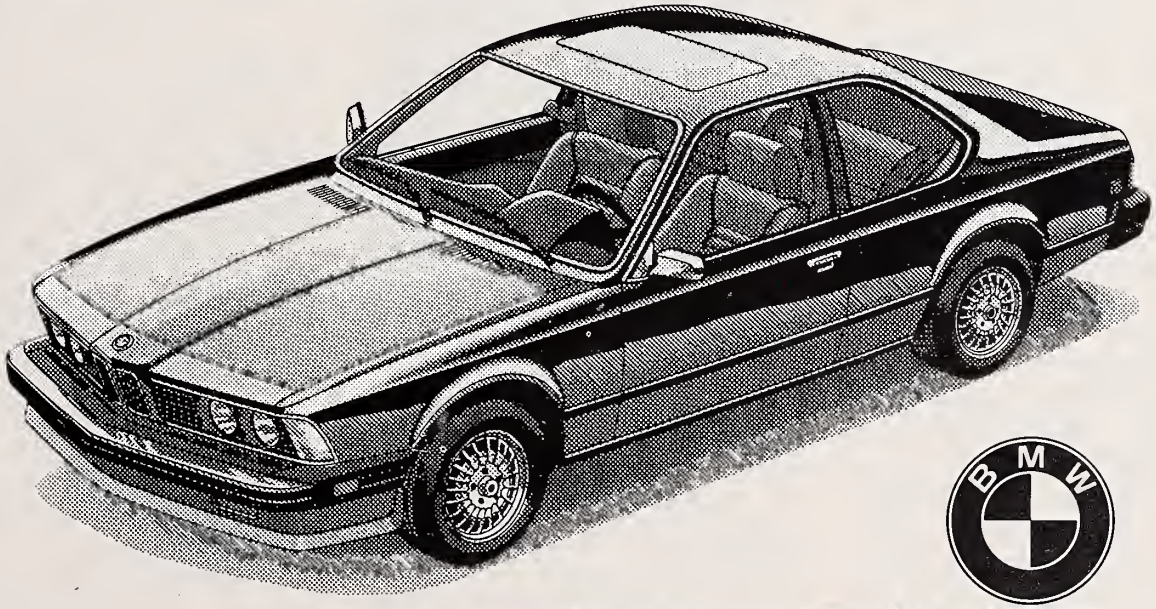
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POST-POLIO SYNDROME

ANN A. BAILEY, M.D.

Many post-polio patients are experiencing unexpected weakness.

Abstract

Patients with history of poliomyelitis are presenting with progressive loss of strength at times accompanied by pain. The later development of such symptoms following acute poliomyelitis is well documented in medical literature and is worthy of the attention of the medical profession.

THE LARGE NUMBER of patients who contracted poliomyelitis in the early 1950s are now approximately 30 years past the acute attack and are bringing to the attention of those involved in their care the phenomenon of progressive weakness and loss of endurance long recognized as a sequela of acute poliomyelitis.[1-3] During the past 4 years, the staff of Roosevelt Warm Springs Institute for Rehabilitation has become aware that many post-polio patients are experiencing unexpected weakness at a relatively young age. Often the unaffected arm or leg is reported to be losing strength. Some patients who have been independent and ambulatory now require bracing or the use of a wheelchair. Many complain of chronic fatigue and vague but severe muscle pain. A search of the available literature reveals recognition of this phenomenon at least since 1899, but the association of acute polio with later development of progressive spinal muscular atrophy has periodically "apparently been forgotten or ignored," as stated by Solven and Riley in 1935.[4]

Survey

To determine the frequency of these new problems, a short questionnaire was sent to persons who had been patients at Warm Springs in 1952 and to persons who contacted Warm Springs as a result of a national television news segment in 1980. Responses do not provide an adequate sampling of the estimated 200,000 persons in the United States who have had polio and are not definitive enough to provide comprehensive information, but a good general idea of current functioning of 399 patients who responded can be gained from the following results:

- 94% have permanent disability from the initial attack.
- Lower extremities are most commonly affected, the left more often than the right.
- 85% are still employed.
- 94% are totally independent in self care.
- 45% require bracing.
- 37% participate in some sort of formal exercise program.

Dr. Bailey specializes in rehabilitation and allergy. She was formerly on the staff of the Roosevelt Warm Springs Institute for 8 years. Send reprint requests to her at P.O. Box 760, Woodbury, GA 30293.

Although medical records indicate that males are more susceptible to polio,[5] female survey respondents outnumbered male respondents 2:1. Current ages range from 27 to 84 years, with an interval since onset of 1 to 74 years. Average length of time since onset is 41 years, with a mode of 31 years.

Of particular interest is the high percentage of respondents (84%) who report recent loss of strength and endurance with a slightly smaller number (70%) reporting pain atypical of the expected musculoskeletal pain.

The incidence of other health problems is found not to vary significantly from the general population.

Discussion

This study is admittedly of little statistical value. The number of completed questionnaires is an insufficient sample of the post-polio cases presently in this country. Interest in completion of forms was predictable and obviously (from accompanying letters) greater in those experiencing symptoms. In addition, the questionnaire submitted was not comprehensive, an attempt being made only to determine whether or not new problems in polio patients warranted concern. As seen from survey results, by far the majority of post-polio patients have been able to care for themselves and to perform productive activities.



PATIENT AGED 37. Polio at age 8 years. One child, daughter, right in picture. Loss of endurance and strength past 4-5 years with difficulty in continuing chores as wife and mother.



Patient aged 63 years. Polio at age 23 (1944). Subsequently confined to wheel chair but able to work in secretarial position until 1978 when loss of endurance forced retirement. Loss of strength and pain in extremities past seven years, progressive. Now unable to perform many previous activities.

With increasing disability, many have been forced to retire or to accept equipment or personal aid. Part of the polio personality seems to be a determination to remain independent, and loss of function has proved emotionally traumatic to most of these patients. To add to their distress, many have been informed by well-meaning but uninformed medical personnel that much of their problem is emotional, although comparison of results of specific muscle testing in our clinic reveals definite, and at times impressive, loss of muscle strength and endurance.

The adverse effects of fatigue and chilling have again become apparent, the detrimental effects of these elements having been documented repeatedly by past observers.[6] Efforts to "strengthen" already compromised muscles invariably leads to further and more rapid loss of strength, as reported previously by Dr. Robert Bennett.[7] Obvious muscle atrophy, frequently with fibrillation and EMG evidence of reinervation, has led to confusion of the later effects of poliomyelitis with amyotrophic lateral sclerosis. A number of studies have defined these as separate entities with grossly different prognoses.[2, 8-10]

It is the hope that the plight of post-polio patients can be lessened somewhat by calling the attention of the medical profession to a previously recognized problem now being faced by the post-polio patients who have bravely and determinedly competed successfully in society despite disabilities.

Conclusion

1. A long recognized relationship exists between acute poliomyelitis and subsequent progressive spinal muscular atrophy.

2. This "post-polio syndrome" is NOT a form of amyotrophic lateral sclerosis although some clinical similarities exist.

3. Fatigue and/or chilling have detrimental effects on muscles previously compromised by poliomyelitis.

4. Post-polio patients deserve better understanding of their increasing weakness as well as emotional support and appropriate equipment to maintain function.

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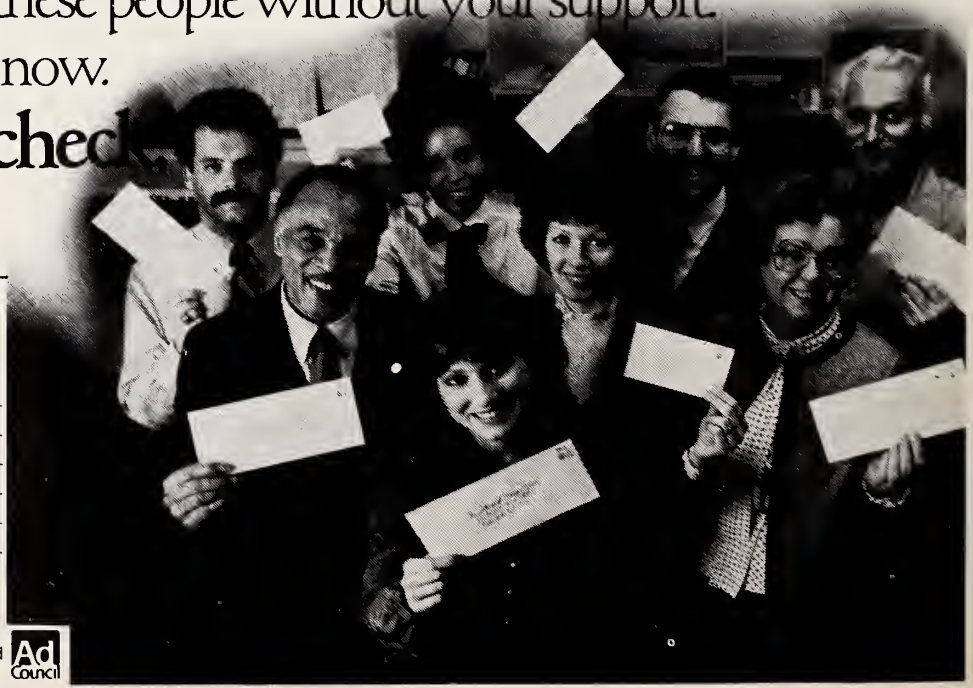
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A Sense of the Future

Another look at the good-ol'-days and a future of changes.

I WAS TALKING with a close friend a few years back, idly and in good humor, about the course that the private practice of medicine seemed to be taking. We talked about the changes that had occurred since we were medical students those many years earlier and about those things that were happening to our practice that day. Perhaps of more significance was our discussion about those changes which seemed to lie inexorably on the horizon. He was worried and concerned, my friend was, discouraged that a life which seemed so pristine and happy, so under his control, when he had first come to Marietta, now looked so rigidly out of control and destined for a character not to his liking. He said to me in a babble of emotion, words flooded with hopelessness and disillusionment, "If one of my children talked of entering medical school today, I would simply not allow him to do it. The way medicine is changing, there will be better ways to live in the future. No one but a fool would go into medicine today."

The future of medicine surely is not going to be the future of the past. It will be different, but who can say that it will not be even better. . . ?

He had forgotten two facts of our lives on that happy summer day — he had forgotten that none of us can "make or let" our children do anything that they are not motivated or destined to do. And he was unaware that I had just mailed the handsome tuition check for the next year's schooling for my son, then a junior in the medical school at Emory. I chose not to remind him of that fact — I was rather proud that my son had gotten in, and I had little worry that he would be happy and a good physician in the future. That judgment of mine has proven true, even though the course that the practice of medicine has taken since that conversation several years ago has been even more unpredictable than we thought at that time. I chose on that occasion to say simply to him, "Someday you and I are going to be old — and likely to be sick. We will lie someday upon a hospital stretcher and look up into the eyes of some young physician upon whose skill and judgment and knowledge our lives may well depend. I do hope — and hope desperately — that that young physician is intelligent and knowledgeable and interested in my welfare. I hope he is calm and confident, satisfied and happy as a physician. I hope he can save my life."

We ended our conversation soon afterwards. We remained close and understanding friends through the years, for the relationship between us had been too meaningful not to allow our honest discourse.

And so it was that I recently came across two expressions of this matter of how we handle the future and how we accept change. One came in the form of an advertisement by a great private enterprise entrepreneur, the Mobil Corporation, an advertisement in *The Wilson Quarterly,* that reads as follows:

Lies They Tell Our Children

"I don't have a future."

With tears streaming down her face, a 13-year-old girl made this bleak assessment to her father. To back up her pessimism, she had brought home from school a mimeographed sheet listing the horrors that awaited her generation in the next 25 years: Worldwide famine, overpopulation, air pollution so bad that everyone would wear a gas mask, befouled rivers and streams that would mandate cleansing tablets in drinking water . . . a greenhouse effect that would melt the polar ice caps and devastate U.S. coastal cities . . . a cancer epidemic brought on by damage to the ozone layer.

Moved by the girl's misery, her father, Herbert I. London of the Hudson Institute and New York University, wrote a book, Why Are They Lying to Our Children? *The book documents how some of the myths of the 1960s and 1970s — and some much older than that — are being perpetuated and taught as gospel truth in some of our schools. And the book*

raises a question in our minds. Will the next generation have any better understanding of science and technology — both their merits and their problems — than our own?

Professor London's book is not a plea for unbridled technology. But it is a plea for balance. And school textbooks, he believes, are notoriously unbalanced. In dealing with environmental questions, for example, no textbook the professor could find made any mention of the following facts:

** Total automobile emissions of hydrocarbons, carbon monoxide, and nitrogen oxide in the U.S. are less than half what they were from 1957 to 1967.*

** The amount of unhealthy sulfur dioxide in the air has been steadily declining since 1970.*

** The bacteria level in the Hudson River declined by more than 30 percent between 1966 and 1980.*

Textbooks, Professor London finds, mythologize nature as eternally benign until disturbed by man. It's a rare schoolbook that talks about volcanoes belching radiation into the air, floods that overwhelm river towns, and tornadoes that lift people into oblivion. Moreover, textbooks hardly mention the promise of a bright future already on the horizon — when average life expectancy may approach 90 years, when products derived from recombinant DNA research will eliminate most viral diseases, when we will enjoy greater leisure, and materials — especially plastics — will be better, stronger, and safer.

Professor London's conclusion — with which we heartily agree — is that we should help our children think for themselves and reach balanced conclusions. Let's look at their textbooks, not to censor them but to raise questions. Let's give them different points of view and help discuss them. That way we can educate a new generation of citizens who aren't scared by science, and who won't be swayed by old mythologies.

Our youngsters do *have a future. We, and the schools, should help them look forward to it with hope, even as they prepare to deal with its problems.*

(end of Mobil advertisement)

"But the atomic bomb is only the scapegoat for our fears. We are not afraid of the future because of a bomb. We are afraid of bombs because we have no faith in the future."

And I thought to myself — the future of medicine surely is not going to be the future of the past. It will be different, but who can say that it will not be even better and more exciting and more challenging — that we won't have more time for ourselves, and, Heaven only knows, that we won't make even more money! I had to ask myself if not perhaps we had been told lies about the future of medicine. This is not to say that I like what is happening in the practice of medicine, for I do not.

I thought for a while that I liked Marietta when I moved here in 1957, better than she presents herself to me now. But then I think, she gives me so much more now that she did not provide earlier. I am not so sure anymore that the practice of medicine in the future will not be a better practice than it has been in the past, a better life, that it will not provide me with an opportunity to be a better parent, and perhaps even a happier person.

And then came a bit of writing done by Jay Bronowsky that he called, "A Sense of the Future." And just a few lines from that little essay go this way:

"I am distressed to see how many people today are afraid of the future and of science together. I believe that these fears are mistaken. They seem to me to misunderstand the methods of science and spring from a gloom about what it has done, which has simply forgotten the facts. We sit under the shadow of the nine o'clock news, nursing our sense of doom, and we think ourselves worse off than our forefathers a hundred and seventy years ago, who were at war with Napoleon for a generation. But 170 years ago, the working week was 80 hours for children. Cholera was more common in England than flu. The country could barely support ten million people, and not a million of them could read. You know how all this has been changed, and don't let anyone tell you that nothing has been gained but comfort. Think of the gain in life and health alone; a population which has topped fifty millions, the infant death rate cut by 80 or 90 percent, and the span of life enlarged by at least twenty-five years. The sewer and the fertilizer have done that, and the linotype and the X-ray tube and the statistician puzzling over inheritance. They have been real liberators. Every machine has been a liberator. They have freed us from drudgery and disease and ignorance and from the misery Hogarth painted that could forget itself only in the stupor of drink.

"I believe that both of these feelings do equal harm; the feeling of marvel as much as the fear. Because they have this in common, that they both want to persuade the layman that there is nothing he can do for himself. Science is the new magic, they whisper, it is out of your hands; for good or ill, your salvation or your doom is the business of others.

"That is why I have attacked the magic before the fear; because the marvel lies below the fear. In the minds of most people today, the fear is plainly uppermost. They are afraid of the future; if you ask them why, they conveniently blame the atomic bomb. But the atomic bomb is only the scapegoat for our fears. We are not afraid of the future because of a bomb. We are afraid of bombs because we have no faith in the future. We no longer have faith in our ability, as individuals or as nations, to control our own future. That loss of confidence has not sprung overnight from the invention of a weapon. The atomic bomb has merely brought home to us, harshly, as a matter of life and death, what has long been growing: our failure to face, our refusal to face, as individuals or as nations, the place of science in our world."

And here I found that I rather liked the ring of that sentence, *"But the atomic bomb is only the scapegoat for our fears. We are not afraid of the future because of a bomb. We are afraid of bombs because we have no faith in the future."*

And so I thought again, are we really afraid of the future of medicine, or unsure of it or unhappy about how it looks because we think we would like the past better than the future? Or are we afraid of the future course of medicine because we have no faith in its evolution or in our own ability to adjust and cope with it?

I haven't reached any conclusions about the matter. I have only gained a little bit more composure and a certain amount of comfort in the realization that things are going to change and that somehow I must change with them. I have gained a sneaking suspicion that most of us are going to adjust happily to that change. I have become a bit more convinced that smart, dedicated, and compassionate young men and women are indeed going to enter the practice of medicine in the future. I don't think I am quite as afraid to grow old and sick as I once was, for I think there will be a good young physician into whose eyes I can look from that stretcher some day. I almost wish I could be guaranteed another 25 years in the practice of medicine to see what really happens with Medicare and Medicaid and DRGs and HMOs and PPOs. I am convinced that a lot of them are not going to work, but I also have a sneaking suspicion that the evolutionary settling down of the thing is going to be one hell of a floor show. It should be a lot of fun to watch.

Charles R. Underwood, M.D.
Surgeon, Marietta

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Time for Rewording *Annual*

A need to update the regulation for annual physicals for hospital employees.

BEGINNING IN THE LATE 1940s,[1] the concept of the "annual physical" became increasingly accepted by the medical profession and the general public. The idea of detecting pre-symptomatic disease was appealing. However, as time passed and data accumulated, it became obvious that very few treatable problems were being discovered before symptoms appeared. In fact, the concept of "annually" was more of a logistical convenience than of any medical importance of 365 days (i.e., it was easy to remember that July, for example, was "time for the physical exam"). As this concept became ingrained in the public consciousness, it was inevitable that it would become law in those areas that were under governmental regulation. Through licensure via the Department of Human Resources, such an area is hospitals in Georgia. This paper addresses the need for updating that regulation as it applies to hospital employees.

This has led to a situation where some hospitals do very little, but do it annually, and therefore comply with the letter of the regulation.

As more scrutiny was applied to periodic examinations (either physical, laboratory, and/or other studies), the concept of "target groups" and "high risk areas" emerged. For example, vastly different testing is warranted for the personnel in a renal dialysis unit in a large metropolitan hospital versus that for the staff in a smaller community hospital with an active obstetric service. The idea of more testing in some groups, and less in others, makes medical sense and is more cost-effective as well.

References in the medical literature substantiating these principles have abounded in recent years, in publications aimed both at the general public[2, 9] and at physicians.[1, 3, 5-8, 10] Perhaps the best-organized outline of this problem is the article, "Periodic Health Exams in Perspective," in *The Harvard Medical School Health Letter*.[2] Several other references — from random but widely divergent sources — question the need for annual examinations in various asymptomatic populations. Of particular interest is the recommendation from the *Federal Register*[4] which requires *periodic* health examinations of hospital personnel in one area, but it avoids any mention of a rigid time frame.

Returning to the situation in Georgia, the following excerpt is from *Rules and Regulations for Hospitals* of the Georgia Department of Human Resources, revision of November 21, 1973; Chapter 290-5-6, page 14:

> *(b) Each hospital shall require that each employee receive a physical examination upon employment and annually thereafter. The examination shall be in sufficient detail, with pertinent laboratory and x-ray data, to assure that the employee is physically and mentally qualified to perform the job to which he is assigned.*

It is obvious that most of this regulation is vague — viz., "sufficient detail" and "pertinent laboratory and x-ray data" are open to individual interpretation; only the "annually" is rigid. This has led to a situation where some hospitals do very little, but do it annually, and therefore comply with the letter of the regulation. There are hospitals (including some with over 150 beds) in Georgia where the "annual physical" consists of weight, blood pressure, and a PPD. The state apparently accepts this as evidence "that the employee is physically and mentally qualified to perform the job." On the other hand, some hospitals approach different groups of personnel with different protocols and different schedules — more often for some groups, less often for others. Even for the "less often" group, however, the

quantity and quality of the examination is frequently far superior to the token "annual" exam of other hospitals. Nonetheless, as the Georgia regulation is now stated, these superior exams may not comply with the "annually" stipulation. Physicians in practice already use this selective approach in their examination of an asymptomatic person. Since many hospital employees (clerical, for example) are not closely involved with acutely ill patients, these employees pose no medical "threat" to such patients and can safely be assessed less frequently than other employees. Those of us involved with hospital employees also need to be allowed to use a selective approach.

Therefore it is suggested that the regulation be modified in the following manner: that the word "annually" be deleted and replaced by "at appropriate intervals." Then, to assure that this change is not abused, the periodic review of hospitals by the state could incorporate into its review a check on the "intervals" being used at that particular hospital. This change would be logical, cost-effective, would not compromise the health or safety of patients and personnel, and would allow hospitals to fit more specific solutions to specific areas or problems.

The current edition of *Rules and Regulations for Hospitals* (at least insofar as it applies to this subject) was last revised in November, 1973. Indeed, this was probably copied verbatim from an earlier revision. It is time for the Georgia Legislature to catch up with the times and put up-to-date wording in that regulation.

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He Figured That if the Recommended Dose Made Him Feel Good, A Double Dose Would Make Him Feel Better.

He Was Wrong.



His reasoning was faulty because the amount of medicine you take is important. A medicine that can help you when taken correctly can make you sicker when taken incorrectly. In other words: *While one dose can do you good, a double dose can do you in!*

To avoid such dangers and to make sure that the drug you are taking does its intended job, follow the directions on the label exactly. If you don't understand them, ask your pharmacist or physician for help.

Medicines can cause a variety of reactions. Not all people have the same side effects but you should know what to watch out for.

When you get any prescription, be sure you know—

- **The name** of the drug
- **Its purpose**—what conditions does it treat?
- **How and when** to take the drug—and when to stop taking it
- What **food, drinks and other drugs to avoid** while taking it
- What **side effects** may result—are they serious, short-term, long-term, etc.?

If you have any questions about your prescription, *ask your doctor or pharmacist.*

A message from the Food and Drug Administration. For more material about being an informed patient, write to: FDA, HFE-88, Rockville, Md. 20857.

A Summary of the 1984 Report of the Joint National Committee on Detection, Evaluation, and Treatment of High Blood Pressure

Mary Ann Henson, M.S.N.

Introduction

BECAUSE OF RECENT developments with implications for the detection and control of high blood pressure, the 1980 Report of the Joint National Committee on Detection, Evaluation, and Treatment of High Blood Pressure[1] has been revised.[2] These developments include: publication of results of major clinical trials; development and introduction of new antihypertensive medications; more evidence of the effectiveness of nonpharmacologic therapy; and further epidemiologic evidence relating elevated blood pressure to an increased risk of premature morbidity and mortality.

Recommendations for the following topics are included in the report: (1) screening and referral procedures; (2) classification according to blood pressure levels; (3) use of nonpharmacologic therapies; (4) updated stepped-care approach; (5) management of mild hypertension; (6) patient-provider interaction; and (7) management of blood pressure in special groups, i.e., blacks, children, the elderly, and pregnant women.

Purpose

The two purposes of the report are: (1) to guide practicing physicians and other health care providers in managing their hypertensive patients; and (2) to guide health professionals in planning and participating in community high blood pressure programs.

Definition/Prevalence of High Blood Pressure

The risk of complications associated with high blood pressure increases as both systolic and diastolic pressure rise.[2] Therefore, a categorical scheme is recommended for use in classifying arterial blood pressure in persons aged 18 years and older. Table 1 is a recommended classification.

Table 1 — Classification of Blood Pressure (BP)

Range (mm Hg)	Category*
Diastolic	
<85	Normal blood pressure
85-89	High normal blood pressure
90-104	Mild hypertension
105-114	Moderate hypertension
≥115	Severe hypertension
Systolic, when diastolic BP <90	
<140	Normal blood pressure
140-159	Borderline isolated systolic hypertension
≥180	Isolated systolic hypertension

* A classification of borderline isolated systolic hypertension (systolic BP, 140 to 159 mm Hg) or isolated systolic hypertension (systolic BP, ≥160 mm Hg) takes precedence over a classification of high normal BP (diastolic BP, 85 to 89mm Hg) when both occur in the same person. A classification of high normal BP (diastolic BP, 85 to 89mm Hg) takes precedence over a classification of normal BP (systolic BP, <140 mm Hg) when both occur in the same person.

High blood pressure is diagnosed in adults when the average of two or more diastolic pressures on at least two consecutive visits is 90mm Hg or higher, or when an average of several systolic pressures on two or more consecutive visits is consistently greater than 140mm Hg. Tables 2 and 3 contain recommended follow-up measures for first and second occasion measurements.

It is estimated that more than 60 million adults in the United States have been found to have elevated blood pressure (140/90mm Hg or greater) or have reported being told by a physician that they have high blood pressure.

Recommendations

Detection — Mass screening programs are no longer recommended, since most adults know their blood

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Articles for this Page are sponsored and approved by the American Heart Association, Georgia Affiliate. Those wishing to contribute papers to this Page are invited to send them to Dr. Laurence O. Watkins, Heart Page Editor, Section of Cardiology, Dept. of Medicine, MCG, Augusta, GA 30909.

Table 2 — Follow-up Criteria for First-Occasion Measurement of Blood Pressure

Range (mm Hg)	Recommended Follow-up*
Diastolic	
<85	Recheck within 2 years
85-89	Recheck within 1 year
90-104	Confirm promptly (not to exceed 2 months)
105-114	Evaluate or refer promptly to source of care (not to exceed 2 weeks)
≥115	Evaluate or refer immediately to a source of care
Systolic, when diastolic BP<90	
<140	Recheck within 2 years
140-199	Confirm promptly (not to exceed 2 months)
≥200	Evaluate or refer promptly to source of care (not to exceed 2 weeks)

* If recommendations for follow-up of diastolic and systolic BPs are different for those aged 18 years or older, the shorter recommended time period supersedes, and a referral supersedes a recheck recommendation.

Table 3 — Follow-up Criteria for Second-Occasion Measurement of Blood Pressure

Range (mm Hg)	Recommended Follow-up*
Diastolic	
<85	Recheck within 2 years†
85-89	Recheck within 1 year
≥90	Evaluate or refer promptly to a source of care
Systolic, when diastolic BP<90	
<140	Recheck within 1 year
≥140	Evaluate or refer promptly to a source of care

* If recommendations for follow-up of diastolic and systolic BPs are different for those aged 18 years or older, the shorter recommended time period supersedes, and a referral supersedes a recheck recommendation.
† Rechecking within 1 year is recommended for persons at increased risk of progressing to higher BPs, including family history of hypertension or cardiovascular event, weight gain or obesity, black race, use of an oral contraceptive, and excessive alcohol consumption.

pressure or should have a measurement during a routine contact with the health care system. The Committee recommends that resources be concentrated on: (1) controlling blood pressure in already diagnosed hypertensives; (2) targeting detection efforts to high risk groups (e.g., blacks, obese persons, and blood relatives of known hypertensives); and (3) those with limited access to the health care system. In addition, health care professionals are strongly encouraged to measure blood pressure at each patient visit.

Initial Measurement and Follow-up — Tables 2 and 3 contain a summary of recommendations regarding measurement and confirmation of blood pressure measurements, and for evaluation and referral when blood pressure elevation is confirmed.

Evaluation and Diagnosis — The report recommends that evaluation of patients with high blood pressure should provide answers to three questions: (1) Is target organ involvement present? (2) In addition to high blood pressure, are other cardiovascular risk factors present? (3) Does the patient have primary hypertension, or is there evidence of possible secondary hypertension?

Table 4 — Laboratory Tests to Be Done Before Therapy Is Initiated

Group I

Hemoglobin and hematocrit
Complete urinalysis
Serum potassium, serum creatinine
Electrocardiogram

Group II

Total and high-density lipoprotein (HDL) cholesterol
Plasma glucose (fasting if possible)
Serum uric acid

The Report advises caution about the possible adverse effects of long-term drug therapy, but emphasizes that this should not be a reason to withhold drug treatment from patients ≥50 years of age.

The Committee recommends laboratory tests which should be done before therapy is initiated (Table 4). Group I tests are needed for determining the severity of vascular disease and possible causes of hypertension. Group II tests permit detection of other cardiovascular risk factors or provide baseline values needed for detecting adverse biochemical effects of therapy.

Treatment

Nonpharmacologic Therapy — Considerable evidence of the effectiveness of nonpharmacologic treatment of high blood pressure has been accumulated in the past 5 years. Nonpharmacologic therapy has particular relevance for patients with mild hypertension, but is also a valuable adjunctive therapy for those patients receiving medications for more severe blood pressure elevations.

The Committee concluded that there is adequate evidence to support recommendation of the following nonpharmacologic approaches to treatment of high blood pressure: weight reduction; moderate dietary sodium restriction; moderation in alcohol consumption; avoidance of smoking; regular, isotonic exercise; behavioral therapy as part of a comprehensive treatment program. Though the evidence of effectiveness for hypertension control of reducing dietary saturated fat is inadequate to justify a recommendation, the Committee noted the beneficial impact of blood cholesterol reduction on the risk of cardiovascular disease.

Mass screening programs are no longer recommended, since most adults know their blood pressure or should have a measurement during a routine contact with the health care system.

Pharmacologic Therapy — The Report advises caution about the possible adverse effects of long-term drug therapy, but emphasizes that this should not be a reason to withhold antihypertensive drug treatment from patients 50 years of age and older. Below the age of 50 years, where the demonstrated benefits of drug treatment (prevention of left ventricular hypertrophy, congestive heart failure, stroke, and increasing severity of high blood pressure) are more limited, the appropriateness of drug treatment remains more controversial, particularly for patients with the mildest levels of high blood pressure (diastolic 90-94mm Hg) and who have no other risk factors. However, the benefits of drug therapy seem to outweigh any known risks from such therapy for those with a diastolic pressure persistently elevated above 95mm Hg and for those with lesser elevations who are at high risk, (e.g., patients with target-organ damage, diabetes mellitus, or other major risk factors for coronary heart disease).

The stepped care approach to drug therapy is recommended because: (1) it leaves room for individualization and flexibility in management; (2) it has been used effectively in major clinical trials demonstrating reduction of morbidity and mortality; (3) in numerous studies, normotensive levels have been achieved in more than 80% of the patients using this simple and relatively inexpensive approach to therapy. The stepped care approach to drug therapy is summarized in Table 5.

Education for Control and Prevention

Two major problems in controlling high blood pressure are patients' lack of adherence to therapy

Table 5 — Stepped-Care Approach to Drug Therapy

Step	Drug Regimens
1	Begin with less than a full dose of either a thiazide-type diuretic or a B-blocker*; proceed to full dose if necessary and desirable.
2	If BP control is not achieved, add either a small dose of an adrenergic-inhibiting agent‡ or a small dose of thiazide-type diuretic; proceed to full dose if necessary and desirable§; additional substitutions may be made at this point.†
3	If BP control is not achieved, add a vasodilator, hydralazine hydrochloride, or minoxidil for resistant cases.
4	If BP control is not achieved, add guanethidine monosulfate.

* B-Blockers include atenolol, metoprolol tartrate, nadolol, oxprenolol hydrochloride, pindolol, propranolol hydrochloride, and timolol maleate.

‡ These include centrally acting adrenergic inhibitors (clonidine hydrochloride, guanabenz acetate, and methyldopa hydrochloride); peripherally-acting adrenergic inhibitors (guanadrel sulfate and reserpine); and an α_1 — adrenergic blocker (prazosin hydrochloride) and the B-Blockers listed above.

§ A high percentage (70% to 80%) of patients with mild hypertension will respond to the above regimen using steps 1 and 2.

† An angiotensin-converting enzyme inhibitor (captopril, enolapril maleate) may be substituted at steps 2 through 4 if side-effects limit use of other agents or if other agents are ineffective. Slow channel calcium-entry blockers (diltiazem hydrochloride, nifedipine, and verapamil hydrochloride) have not been approved for therapy in hypertension but may be acceptable as steps 2 or 3 drug.

and their tendency to discontinue contact with the health care system. Some suggestions for improving long-term adherence include:

1. Simplifying the regimen. Most antihypertensive drugs can be taken once or twice daily.
2. Providing simple written instructions on dose, common side effects, and therapeutic goals for the prescribed drug.
3. Reviewing the patient's progress toward blood pressure goal on each visit.
4. Expressing a willingness to change drugs to avoid side effects may encourage patients to report side effects and to express problems and concerns at each visit.
5. Improving the convenience of office visits by providing clear reminders of appointments, keeping the waiting time to a minimum, and having the office staff give special attention to hypertensive patients.
6. Telephoning patients who miss appointments to discuss and solve attendance problems.
7. Increasing the attention given to nonadherent patients by scheduling counseling visits more frequently and by recruiting the help of nurses, pharmacists, nutritionists, and family members.
8. Encouraging patients to contact a health care professional if they have questions about their antihypertensive regimen.
9. Providing praise for the patient's success is achieving blood pressure reductions.

The Report concludes by addressing special populations and management problems, e.g., black hypertensive patients, patients with diabetes mellitus, young patients, elderly patients, pregnant patients, and patients with renal impairment.

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Informed Consent for Administration of Psychotropic Drugs

William B. Keisler

THE BASIC LAW of informed consent applicable to most medical and surgical procedures to be performed in the State of Georgia is the Georgia Medical Consent Law.[1] However, special informed consent requirements apply with respect to abortion, sterilization, and artificial insemination procedures, and with respect to the treatment of minors for venereal diseases and drug abuse.[2]

In this month's "Legal Page," we will discuss another area involving special informed consent requirements: the administration of psychotropic medications. This subject is somewhat complicated, because diverse authorities [including the Georgia General Assembly, the Georgia Department of Human Resources (DHR), and the Joint Commission on Accreditation of Hospitals (JCAH)] have adopted and imposed non-uniform requirements and standards for informed consent in connection with psychotropic medications.

Diverse authorities (DHR and JCAH) have adopted and imposed different requirements and standards for informed consent in connection with psychotropic medications.

General Statutory and Regulatory Provisions

The Georgia Medical Consent Law remains the general law of informed consent in Georgia for medical and surgical procedures other than those procedures for which special informed consent rules have been adopted in Georgia. Under the Georgia Medical Consent Law, a written consent which discloses in general terms the treatment or course of treatment for which consent is given provides sufficient information for an authorized person to give a valid consent.[3] (The law of informed consent in some other jurisdictions is more expansive, requiring the physician to disclose not only the general course of the proposed treatment but also the material risks and side effects associated with the proposed treatment and the alternatives to the proposed treatment.)[4]

In 1975, the application of the Georgia Medical Consent Law was extended to cover treatment of psychiatric patients as well as treatment of medical and surgical patients.[5] However, in 1978, the General Assembly partially reversed the applicability of the Medical Consent Law to psychiatric patients when it rewrote the chapters of the Georgia Health Code that address hospitalization and treatment of psychiatric patients,[6] habilitation of mentally retarded persons,[7] and hospitalization and treatment of alcoholics and drug abuse patients.[8]

These chapters of the Georgia Health Code, as rewritten in 1978, provide, in general, that unless disclosure is determined to be detrimental to the physical or mental health of the patient (or client), each patient under treatment or habilitative care for mental illness, mental retardation, alcoholism, or drug abuse has a right, among other rights, to be fully informed concerning his medication, including its side effects and available treatment alternatives.[9] In addition, each patient is explicitly given the right "to refuse medication except in cases where a physician determines that refusal would be unsafe to the patient or others."[10] (The Georgia Medical Consent Law, however, apparently still applies to disclosures and consents relating to psychiatric treatments or procedures *other than* the administration of psychotropic medications.)

Prepared at the request of the Medical Association of Georgia. Mr. Keisler is an associate in the law firm of Powell, Goldstein, Frazer, and Murphy, General Counsel to the Association, 1100 C&S National Bank Building, Atlanta, GA 30335.

Exceptions to Informed Consent Requirements

These statutory and regulatory requirements are not applicable in all cases; rather procedures may be utilized to administer psychotropic medications, even if the patient, though capable and competent to consent, refuses to do so. These procedures may be used *only* in certain limited circumstances: If a physician determines that the patient's refusal of that medication would be unsafe to the patient or others, then the physician may administer the medication to the patient despite the patient's refusal.[11] The statute contemplates, however, that a single physician would be permitted so to administer medication over the patient's refusal only in an initial dosage appropriate in a crisis situation to avoid the unsafe consequences of not administering the medication. In order to continue the medication over the patient's objection or refusal after the "initial emergency treatment," two physicians must concur that failure to administer the medication would be unsafe for the patient or others.[12]

DHR's New Policy

In October of 1984 (partly in response to a patient lawsuit), DHR adopted and promulgated a new policy (the "Policy") with respect to informed consent for psychotropic drugs administered in psychiatric and mental retardation facilities operated by DHR. The Policy requires physicians in all such facilities to use an Informed Consent for Medication Form (the "Form") prescribed by DHR to document patient consent to the administration of psychotropic medications.

Implementation of the Policy by DHR appears to be . . . [an] attempt to protect itself from potential liabilities. . . .

The Form consists of a physician's certification section and a patient consent section. The Form requests the physician to certify that he or she has discussed with the patient (or the patient's representative) the nature and purpose of the psychotropic medication proposed to be administered, the benefits, side effects, and risks associated with use of that medication, and treatment alternatives to the use of that medication, including no treatment. The physician must also certify that he or she informed the patient of the estimated time for which administration of the psychotropic medication would be required and that he or she informed the patient that the patient has the right to withdraw consent and the right to refuse the medication, unless such refusal would be unsafe for the patient or others.

In the patient consent section, the Form requests the patient to confirm that the physician has explained to the patient the benefits and risks of the medication proposed to be administered, that the patient consents to taking the medication, and that the patient understands that he or she may withdraw his or her consent or refuse to take the medication, unless such refusal is determined by a physician or physicians to be unsafe for the patient or others.[13]

Implementation of the Policy by DHR appears to be the method chosen by DHR, as the administrator of a statewide hospital system, to attempt to protect itself from potential liabilities in connection with possible claims of patients that psychotropic medications were administered to them without their valid, informed consent.

JCAH Standards

The general informed consent standards to be observed by psychiatric facilities accredited by the JCAH also contemplate that accredited hospitals will provide full disclosure of proposed treatments, including benefits, risks, side effects, and treatment alternatives to patients receiving psychotropic medications. The specific requirements contained in the JCAH Consolidated Standards Manual for Child, Adolescent, and Adult Psychiatric, Alcoholism, and Drug Abuse Facilities (the "Consolidated Standards Manual") include that:

> *[T]he patient, the patient's family, or the patient's legal guardian shall be fully informed about . . . the nature of the care, procedures, and treatment that he or she will receive; . . . the risks, side effects, and benefits of all medications and treatment procedures used, . . . the alternate treatment procedures that are available; . . . [and] the right, to the extent permitted by law, to refuse specific medications or treatment procedures. . . .*[14]

Furthermore, the Consolidated Standards Manual

requires that written, dated, and signed informed consent forms be obtained from the patient, the patient's family, or the patient's legal guardian, as appropriate, for:

a. surgical procedures;
b. electroconvulsive therapy;
c. unusual medications;
d. hazardous assessment procedures;
e. audiovisual equipment; and
f. other procedures where consent is required by law.[15]

Accordingly, for psychiatric hospitals (as opposed to individual psychiatrists), the Consolidated Standards Manual already requires (and has required at least since 1981) the same kind of expansive informed consent contemplated by DHR's new psychotropic medication informed consent Policy. In addition, the Consolidated Standards Manual also contemplates written documentation (though not in any prescribed format) of disclosure and consent where, as in the case of administration of psychotropic medications, consent of the patient is required by law.[16]

Conclusion

In short, while most medical and surgical procedures may be performed in Georgia on the basis of an informed consent which discloses only the general course of the proposed procedure or treatment, the administration of psychotropic drugs requires more extensive disclosure under the requirements imposed by the various authorities empowered to impose such requirements. In all cases of administration of psychotropic drugs in Georgia (whether administered in a hospital or not), the Georgia law and regulations, which require disclosure of side effects, risks, and available treatment alternatives, apply. In state facilities operated by DHR, the new DHR policy, which requires use of DHR's informed consent form, applies. In facilities accredited by JCAH, the JCAH standards, which specifically require written consents (but not in any specifically prescribed format), apply. Thus, physicians and institutions will need to recognize the differences in the informed consent requirements imposed by these authorities for administration of psychotropic drugs and comply with the applicable requirements in each setting in which psychotropic drugs are administered.

Notes

1. O.C.G.A. Chapter 31-9.

2. Abortion procedures are governed by O.C.G.A. Sections 16-12-140, *et seq*. Sterilization procedures are governed by O.C.G.A. Sections 31-20-1, *et seq*. Consent for artificial inseminations is addressed in O.C.G.A. Section 43-34-42. Consent for treatment of minors for venereal diseases is addressed in O.C.G.A. Section 31-17-7. Consent for treatment of minors for drug abuse (excluding alcoholism) is addressed in O.C.G.A. Sections 37-7-8 and 37-7-20.

3. O.C.G.A. 31-9-6(d).

4. See Annotation: Modern Status of Views as to General Measure of Physician's Duty to Inform Patient of Risks of Proposed Treatment, 88 ALR3d 1008, *et seq*.

5. Ga. L. 1975, p. 704, §1. *See* O.C.G.A. §31-9-4: "This chapter shall be applicable to the care and treatment of patients in facilities for the mentally ill. . . ."

6. Title 88, ch. 5, Ga. Code; Title 37, ch. 3, O.C.G.A.

7. Title 88, ch. 25, Ga. Code; Title 37, ch. 4, O.C.G.A.

8. Title 88, ch. 4, Ga. Code; Title 37, ch. 7, O.C.G.A.

9. *See* O.C.G.A. §§37-3-162, 37-4-122 and 37-7-162.

10. *See* O.C.G.A. §§37-3-163, 37-4-123 and 37-7-163. The official DHR Rules and Regulations regarding the right of mentally ill patients to informed consent for administration of psychotropic drugs are to the same effect. Ga. Rules and Regulations §290-4-6-.02.

11. O.C.G.A. §§37-3-163, 37-4-123 and 37-7-163.

12. Id. In addition, although not legally required, whenever a psychotropic medication is administered without the patient's consent, it would be appropriate for physicians to record in that patient's medical record each determination that failure to administer that psychotropic medication to that patient would be unsafe for that patient or others.

13. In the event that the patient is an adjudicated incompetent, a minor or a person physically incapable of giving or withholding consent, the Policy would permit the required consent to be given by the legally appointed guardian of an incompetent, a parent of a minor, or the spouse, adult sibling, or grandparent of a person physically incapable of consenting. *See also,* Ga. Rules and Regulations §290-4-6-.02(2)(b).

14. JCAH Consolidated Standards Manual, 1985, p. 54-55.

15. JCAH Consolidated Standards Manual, 1985, p. 55.

16. In addition, the JCAH Accreditation Manual for Hospitals (the "AMH"), which applies to general acute care hospitals and to general medical and surgical care provided in such hospitals (as well as to psychiatric care and psychotropic drug treatments provided in such hospitals) requires hospital medical staffs and governing bodies to develop an informed consent policy consistent with applicable law and to include in patient medical records evidence of the informed consents given by patients for procedures and treatments for which informed consent is required by the policy. *See* 1984 AMH, p. 80-81. In addition, the AMH sets forth the JCAH approach to informed consent in an introductory section addressing patient rights and responsibilities as follows:

> *The patient has the right to reasonably informed participation in decisions involving his health care. To the degree possible, this should be based on a clear, concise explanation of his condition and of all proposed technical procedures, including the possibilities of any risk of mortality or serious side effects, problems related to recuperation, and probability of success. The patient should not be subjected to any procedure without his voluntary, competent, and understanding consent, or that of his legally authorized representative. Where medically significant alternatives for care or treatment exist, the patient shall be so informed. 1984 AMH, p. ix.*

This statement contemplates more disclosure than required under the general Georgia Consent Law and no less disclosure than required under the special provisions of Georgia's law of informed consent for psychotropic medications. In addition, the AMH clearly contemplates that hospitals should require documentation in patient medical records of information disclosed to patients and consents given by and on behalf of patients. ■

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PERSONALS

First District

C. Emory Bohler, M.D., a family practitioner of Brooklet, was honored for his contribution to the Georgia Board of Human Resources at its March meeting. Dr. Bohler was commended for combining "Service to Georgia's rural population with leadership at the highest levels of his profession," according to the Board's resolution. He has chaired the Mental Health and Mental Retardation Committee and has been a member of the Youth Services, Rehabilitation Services, and Physician Credentials committees.

Curtis G. Hames, Sr., M.D., will help coordinate a multidisciplinary research team that will be examining the relationship between trace element tissue levels and learning. Dr. Hames, an internist, is well known in research circles for his work on the relationship between minerals lacking in this region's soil and the high incidence of cardiovascular disease found there. The region is known as the "stroke belt."

Fifth District

Robert H. Curry, M.D., a pediatrician from Atlanta, received the status of Honorary Membership in the American Academy of Physician Assistants Association. Dr. Curry has distinguished himself as a physician assistant educator and supporter during his tenure as Program Director and as Medical Director of the Physician Assistant Program at Emory University.

Roger T. Sherman, M.D. Professor of Surgery at Emory University was voted the Best Clinical Professor by the graduating seniors in the School of Medicine for 1985.

Sixth District

Peach County Hospital has named **Douglas J. Erickson, M.D.,** a pathologist, as Laboratory Director. Dr. Erickson is a graduate of Duke University Medical School and completed his residency at Vanderbilt University Hospital. Also appointed to the staff to assist Dr. Erickson were **Alex Mitchell, M.D.,** and **Gary Walker, M.D.**

E. Capers Palmer, Jr. M.D., was elected president of Georgia Association of Pathologists at its recent meeting in Columbus. Dr. Palmer has been chief of pathology at West Georgia Medical Center since 1976. He is a Fellow of the College of Pathologists and American Society of Clinical Pathologists. He is a member of the American Society of Cytology, and the American Association of Blood Banks.

Anthony A. Malizia, Jr., M.D., a urologist in Riverdale, addressed the Bureau of Medical Devices of the Food and Drug Administration in Silver Springs, Maryland. Dr. Malizia serves on the clinical faculty of the Emory University School of Medicine. He spoke about teflon paste migration and silicone genitourinary prosthesis surface degradation.

Eighth District

Stephen Spain, M.D., a general practitioner, and **W. Charles Miller, Jr., M.D.,** a general surgeon, have opened practices in Fitzgerald.

Brenda H. Thomas, M.D., has opened an office for the practice of pediatrics in Hazelhurst. Dr. Thomas practiced in Waycross before moving to Hazelhurst.

DEATHS

George M. Callaway, Jr.

George M. Callaway, Jr., M.D., 50, of Atlanta, died April 29. Dr. Callaway was a nephrologist at Emory University Hospital. He received his M.D. from Emory University.

Survivors include his wife, two sons, and one daughter. ■

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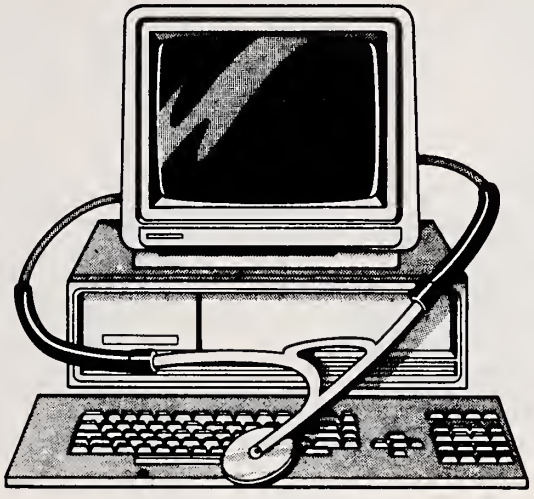
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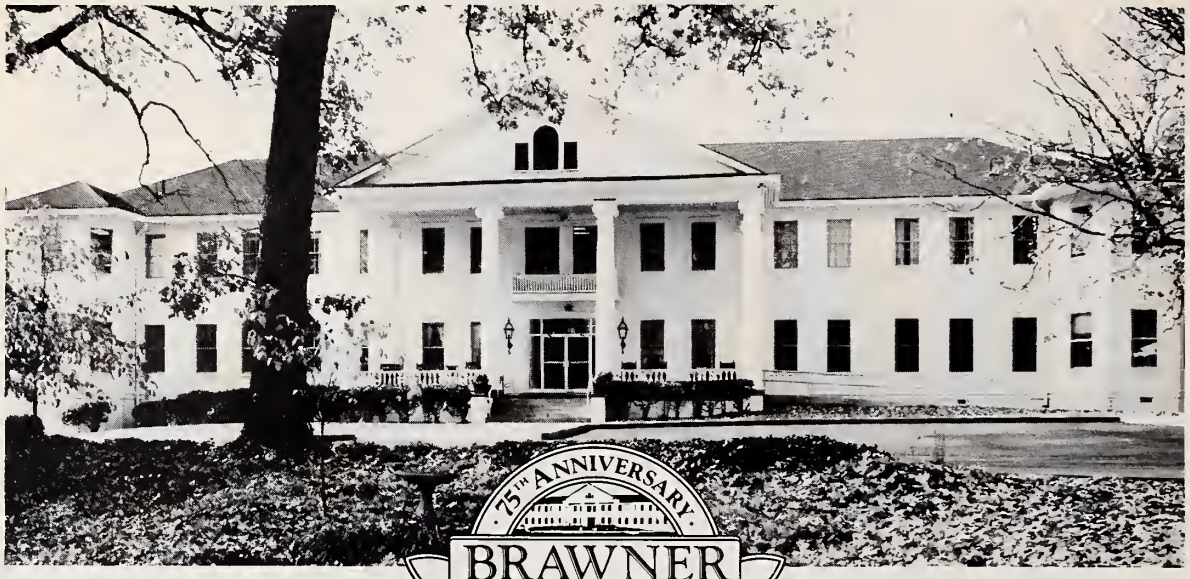
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> Soter NA, Wasserman SI, Austen KF. Cold urticaria release into circulation of histamine and eosinophil chemotactic factor of anaphylaxis during cold challenge. N Engl J Med 1976;294:687-90.

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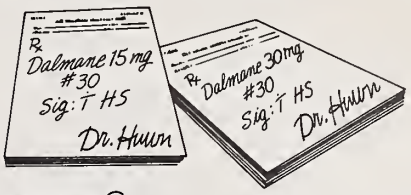
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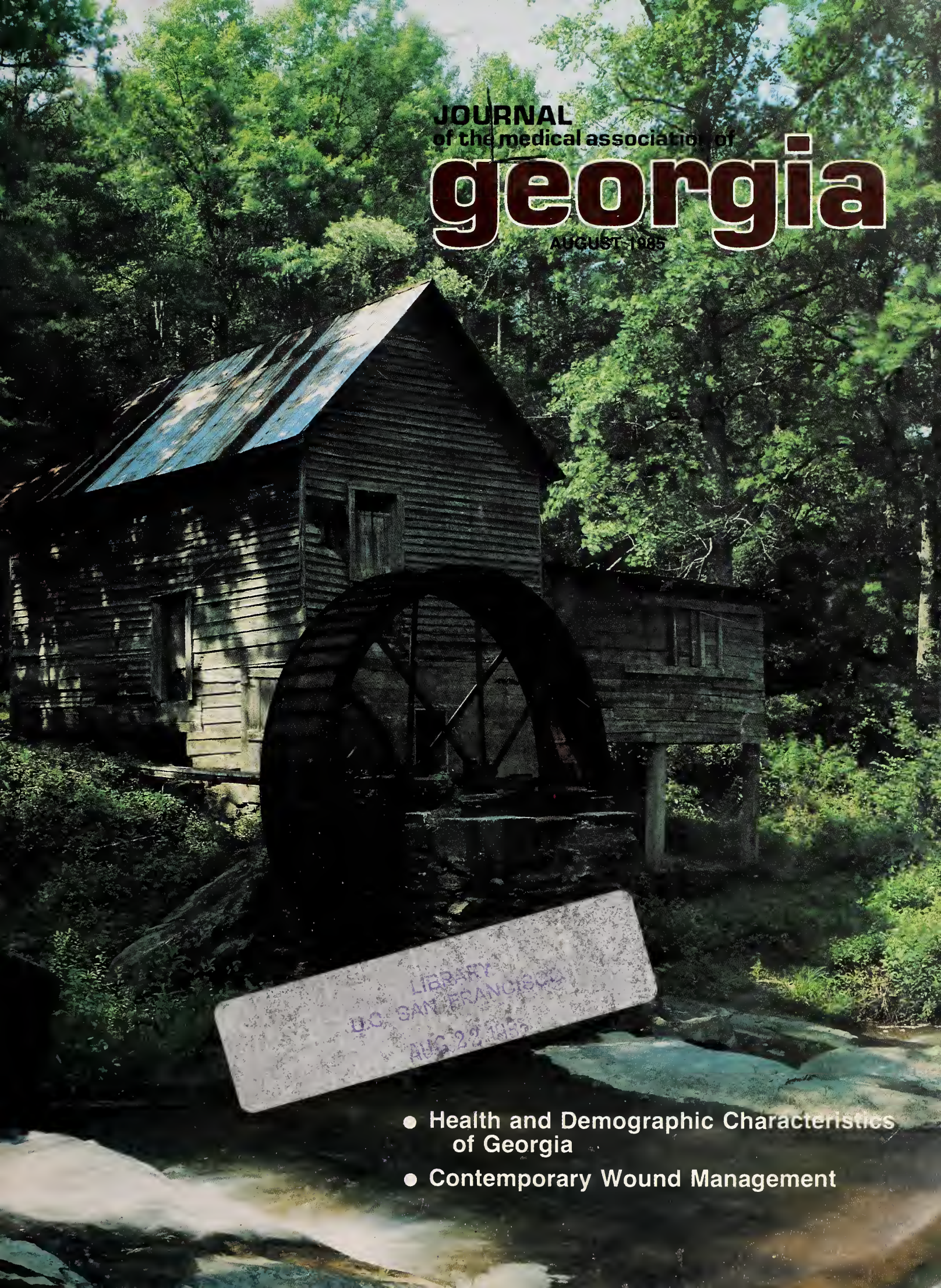
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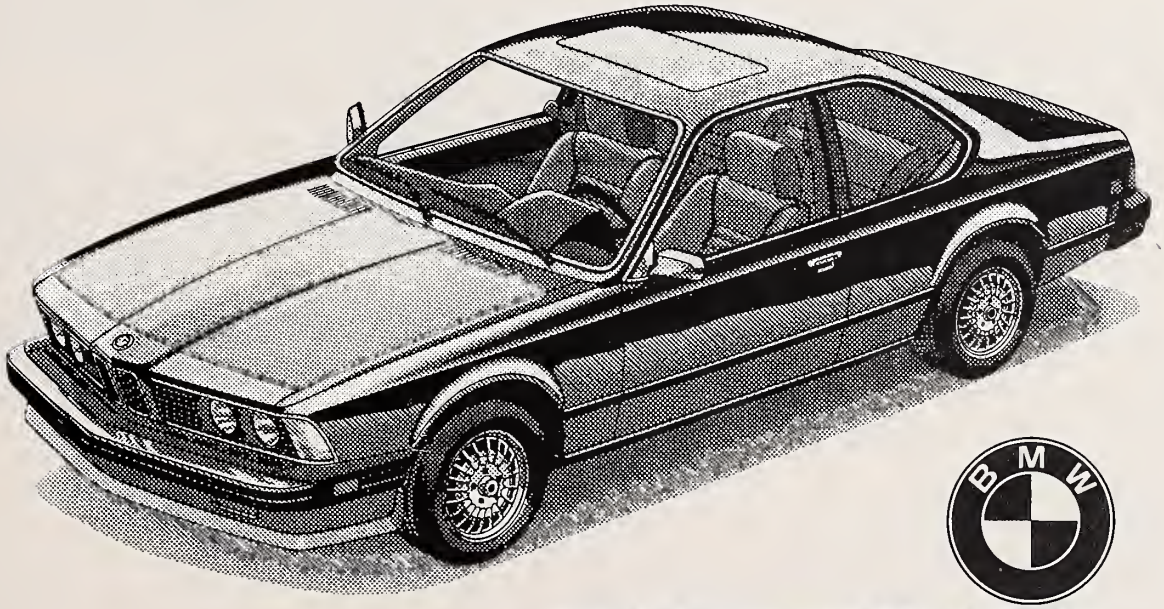
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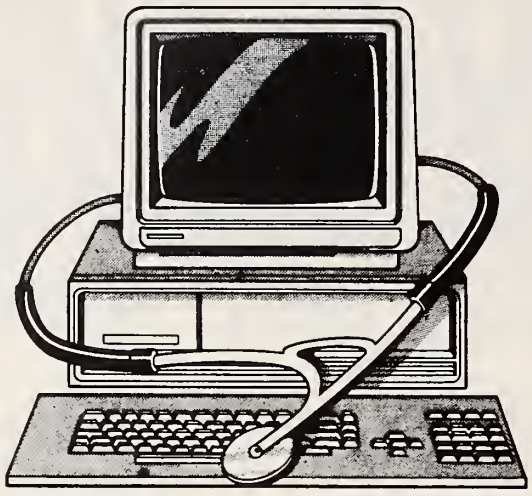
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A grist mill in north Georgia is featured on this month's cover. Photo by Chuck Rogers, Atlanta.

Incidental Intelligence . . .

Congress Puts GME Bills on Fast Track

As potential savings items in the federal budget, proposals to drastically alter the way Medicare pays for graduate medical education are on the Congressional fast track and the field of candidates is growing.

Four legislative alternatives to the President's proposals have been introduced for consideration in the Congressional budget process which is now seriously bogged down in House/Senate conference.

Three of the contenders would limit residencies for foreign medical graduates and modify Medicare contributions to direct training costs, promoting primary care over specialty care training. The other would establish hospital grants that would be updated for inflation and adjusted up to a point for changes in the size of an institution's residency program.

In introducing the latter proposal, Ohio Republican Ralph Regula claimed the measure had "universal" support within the medical education community and privately some medical groups admit a preference for the Regula approach. They see it as less restrictive than the other legislative approaches and believe its adjustments for size make it preferable to the Administration's proposed freeze.

Among the other legislative approaches, witnesses at a recent Senate Finance Committee hearing appeared to favor a plan that has just been introduced by three Senate Finance Committee members — Sens. Robert Dole (R-KS), David Durenberger (R-MN) and Lloyd Bentsen (D-TX).

The plan (S. 1158) would freeze Medicare payments for health professions training costs in 1986 and in future years would limit the number of years of medical training Medicare would contribute to. It is in competition with a proposal by Sen. Dan Quayle (R-IN) that would condition Medicare payment on a fixed proportion of primary care residents and with one by Rep. Henry Waxman (D-CA) that would fund primary care residents at a higher level than other specialties. Quayle's bill has been approved by a subcommittee of the Labor and Human Resources Committee.

While the medical education establishment generally accepts the premise that primary care residencies should be encouraged, witnesses from 12 hospital, medical and academic organizations told Durenberger that they are skeptical about plans that would base payment on a government's definition of primary care or of the appropriate distribution of residencies between specialties.

"A quota or fixed ratio (of physicians) is very difficult in a system in great flux," warned Louis J. Kettel, MD, who is vice chairman of the American Medical Association's medical school section. "Flexibility is important as the market adjusts to diagnosis related groups" and as changes occur in the "boundaries of who is doing primary care," the University of Arizona Medical College dean added.

None of the witnesses, on the other hand, expressed outright opposition to the Senate Finance members plan, though most of the medical and academic groups agreed with Dr. Kettel's assertion that limits on the number of years of training Medicare will support should "not be adopted without assurances that adequate funding will remain available for residencies with long-term training programs."

Virtually every group favored S. 1158's elimination of Medicare funding for residencies filled by foreign medical graduates who are not U. S. citizens, although all urged that the provision be phased in to protect those institutions that are presently very dependent on FMGs. A majority of the groups suggested that funding should be denied to American citizen FMGs as well and Congressional staffers say there is a good possibility that the bill will be altered to include both these recommendations.

The Blues Release Transplant Criteria

The Blue Cross and Blue Shield Association has released a list of criteria that can be used to help plans select medical centers for heart or liver transplantations.

By limiting coverage to transplant centers with good track records, Blue Cross-Blue Shield plans can be assured the highest quality of care, the national association believes. "Providers with more experience . . . tend to be more effective than providers with less experience," according to the report, entitled "Criteria for Evaluating Institutions for Liver and Heart Transplants."

California Blue Shield is the first plan to apply selection criteria to transplant centers. It has been so successful that it has decided to apply similar selection criteria to percutaneous transluminal coronary angioplasty, obstructive sleep apnea treatments, lithotripsy, and other procedures.

Because other plans risk reprisal under antitrust laws, the national association has been hesitant to urge nationwide adoption of transplant selection criteria. The report advises each plan to examine its state statutes to see whether the use of selection criteria would violate restraint-of-trade provisions.

The sudden interest in evaluating the competence of transplant centers is prompted, in part, by the exponential growth in the number of transplant institutions. Nationwide, the number of heart transplants jumped from 180 to 320 and the number of liver transplants increased from 160 to 240 between 1983 and 1984. A recent report by the Battelle Institute found that 197 centers are ready to jump into the heart transplant business if federal coverage is provided.

The criteria face stiff resistance from the medical community which fears restrictions on where, when and how it provides care. A limit on the number of transplant centers stifles innovation by newer and less established centers, says the American Hospital Association. In addition, it creates a "Catch-22" situation where a center needs experience to qualify but must qualify to gain experience.

Similar limitations on coverage — attempted but defeated by Congress last year — would have given the Department of Health and Human Services (HHS) the authority to restrict coverage for transplants and other

procedures to designated medical centers.

There are signs that the Reagan Administration is now considering a similar approach. At a May press conference, HHS Secretary Margaret Heckler said that heart transplantations may achieve a "medically acceptable" survival rate "only in medical centers where a critical mass of clinical expertise and experience has been gathered."

The guidelines place transplant centers into four different categories:

- "established" centers, performing at least 24 transplants in the past 2 years with survival rates between 70% and 85%.
- "Emerging" centers, performing between 12 and 23 transplants in 2 years and having survival rates between 60% and 80%.
- "intermediate" centers, performing between 6 and 11 transplants. Because their survival rates are based on so few transplants, it is difficult to assess the quality of these centers, the report says. Blue Cross-Blue Shield plans should assess each center on a case-by-case basis.
- "early" centers, performing fewer than 6 transplants in 2 years. These centers must "prove themselves."

The guidelines also suggest criteria for evaluating the internal structure of a transplant center. Institutions should have a transplant surgeon who has received clinical training from another transplant center, they state. Additionally, an institution should be able to provide care before the transplant, after the transplant, and after discharge. It also should be able to provide safe and effective immunosuppressive therapy, with a staff well-trained in handling the special problems of these patients.

Experience is important, the report shows. Potential heart transplant centers should perform at least 500 cardiac catheterizations a year, 250 open heart surgical procedures a year, and percutaneous transvenous endomyocardial biopsies. Liver transplant centers should have a staff that is experienced in the treatment of hepatic disease.

Patient selection should be standardized, as well. Heart transplant centers should select patients based on National Heart, Lung, and Blood Institute (NHLRBI) criteria; liver transplant centers should select patients based on criteria set by the 1983 National Institutes of Health consensus conference.

New Medicare Regs Freeze Fees, Shift Prices

In addition to freezing Medicare's base payment rates for 1986, new regulations proposed by the Reagan administration would also lead to significant shifts in the prices Medicare pays hospitals.

Thus far, the regulations have drawn attention mainly for the proposed rate freeze. Health Care Financing Administration officials have included an elaborate set of calculations that concludes rates were too high in 1985 and could be reduced by at least 2.85%. A rate reduction was rejected as "punitive."

In addition to the base payment rate, however, Medicare payments are based on the relative weight of the diagnosis related groups the patient is assigned to. The new regulations propose to rerank or recalibrate the weights of the system's 470 DRGs. This will significantly increase the price paid for some conditions such as cataract surgery and lens implants while decreasing payments for other conditions such as cardiac arrhythmia.

Published in the Federal Register on June 10, the regulations also would affect the price of some individual medical procedures by assigning them to a different DRG. They would bring alcohol and drug treatment centers into the prospective pricing system; create a new DRG for some bilateral joint procedures; and establish a process for making mid-year changes in the DRGs. Public comment would follow at the end of the year.

The new rules leave open the politically sticky issue of revising a wage index used to adjust DRG rates for local labor costs. A revised index proposed in the rules would lead to major payment increases for some hospitals while decreasing payments to others and it is slightly more beneficial to rural hospitals than urban hospitals.

Congress has directed that the new index be applied retroactively, however, and some hospitals would have to pay back enormous sums if this provision were applied. HCFA officials are asking Congress for advice on this issue and they hope Congress will eliminate the retroactivity clause.

Open for public comment only until July 10, the new rules would also freeze rates for hospitals that are exempt from the prospective payment system and from state rate controls. They would continue the transition from rates that are partially based on hospital specific and regional costs to one that is based entirely on uniform national rates. They do not include an adjustment for hospitals that treat a "disproportionate" share of elderly and indigent patients. They propose a new method of counting hospital beds and residents for adjusting payments to teaching hospitals.

The decision to impose the freeze through regulations has angered many Congressmen. Hospitals hope to play on this to win some adjustments. The for-profit Federation of American Hospitals has threatened to sue the federal government if the freeze is accomplished by regulation rather than legislation and the American Hospital Association has issued an alert asking all its members to protest the Administration's action. The AMA also has opposed the freeze on hospital rates.

Cigarette Tax Poll: Keep the Tax High

A new Gallup poll has found that 75% of the American public believes the federal tax on cigarettes should be kept at 16 cents rather than cut back to eight cents.

The poll, which was conducted for the National Heart Savers Association, found that only 18% of Americans believed that the tax should revert to eight cents as scheduled for

October 1. Seven percent of the more than 1000 people interviewed were undecided.

The poll comes at a time when Congress is considering at least 12 different cigarette tax measures. Five of the bills would increase taxes to 32 cents; five would hold the tax at 16 cents and, in some cases, then raise it annually by a percentage equal to the increase in the consumer price index. The stiffest proposal, by Rep. Anthony Beilenson (D-CA), would raise the rate to 40 cents per pack.

The bulk of the proposals (9) would earmark at least a portion of the increased federal revenues to the Medicare hospital trust fund.

Debate could come as part of the federal budget action if Congress is able to agree on a budget resolution. The Reagan Administration is opposed to that approach, however, and has said that the current 16 cents tax should be allowed to revert to 8 cents on October 1.

Bills to Provide Medicare-Medicaid Coverage for Respiratory Care

Claiming that current rules "violate common sense," Rep. Ron Wyden, (D-OR) and Sen. John Heinz (R-PA) have introduced bills to provide Medicare and Medicaid coverage for respiratory care outside a hospital setting.

The legislation, the Home Respiratory Care Act of 1985, would provide coverage to respirator-dependent patients who had already been hospitalized for 30 days and who preferred to be treated at home or in a nursing home. It results from the disbanding of a federal board that had approved waivers that permitted Medicaid to pay for about 200 seriously disabled children and adults who had remained hospitalized because Medicare or Medicaid would pay for care inside the hospital but not at home.

The Reagan Administration says the board is no longer needed since states can obtain Medicaid waivers, but critics say that the waiver procedure is difficult and coverage for respirators and other services will remain unavailable in many states.

The issue also has led to hearings on pediatric home health care in the Senate Labor and Human Resources Committee and hearings are expected in the House Commerce health subcommittee.

The review board was formed after President Reagan called the nation's attention to the case of Katie Beckett, an Iowa child who remained hospitalized because Medicaid would not pay for a respirator in her home. HHS officials estimate that Medicaid would save about $50 million a year under the process.

Heinz and Wyden say their bill would enable abut 2,200 hospitalized, respirator-dependent patients to go home and that it could save Medicaid $20 million a year. The measure would be at least cost-neutral to Medicare, according to the sponsors.

Commission on Bioethics Bill

A successor to the now-defunct President's Commission for the Study of Ethical Problems in Medicine has been introduced by Tennessee Senator Albert Gore Jr.

The proposed National Commission on Bioethics would examine issues presented by the application of new technologies to humans. For instance, its first task would be to report to Congress on the implications of human applications of genetic engineering.

A similar commission was proposed last year as part of the National Institutes of Health reauthorization bill, but died when President Reagan vetoed the legislation. The earlier Commission expired in 1982.

The Commission would be composed of 15 members, four with biomedical backgrounds and three in health care. The remaining members would be members of the public or representatives of law, ethics, and theology. These members would be appointed by a special 12-member Congressional Board on Bioethics, also established by the bill.

It would serve only as an advisory body; the commission would have no regulatory enforcement power. However, it would report to the Congress.

"The Commission will provide Congress with much-needed analysis of the many difficult bioethical issues that confront our society," said Sen. Gore.

Supreme Court to Hear "Baby Doe"

Tackling one of the major medical issues in recent history, the Supreme Court has agreed to hear arguments next term on *AMA et al., vs. Margaret M. Heckler;* the so-called "Baby Doe" case.

The Court must decide whether the nation's civil rights statutes apply to the the treatment of handicapped newborns — in other words, whether the anti-discrimination law covers medical decisions in the same way it covers transportation, housing, and employment decisions.

Lower courts have already ruled that it does not. Regulations that would have sent investigative squads into hospital nurseries to find violations of Section 504 of the Rehabilitation Act have been proposed twice — and rejected twice.

Since then, Congress has passed legislation saying that intervention is sometimes inappropriate: when death is imminent, when treatment is futile and inhumane, when treatment would not correct all of the infant's life-threatening conditions, and when the infant is chronically and irreversibly comatose.

If the Supreme Court justices decide that the anti-discrimination law does apply, hospitals risk losing all federal funding if found guilty of withholding care.

Administration of the current "Baby Doe" law — which is based on anti-child abuse legislation, not

anti-discrimination laws — would not be changed in any substantial way, according to Justice Department officials. Whereas the child abuse legislation focuses specifically on state and local child abuse authorities, the anti-discrimination regulations targeted hospital administrators.

Cyclamate Clears Another Hurdle

In the latest chapter of its regulatory story, cyclamate has been cleared of any direct link to cancer. But it may cause tumors in the presence of other carcinogens, according to a new study by the National Academy of Sciences (NAS) released in June.

The NAS panel found that "the weight of experimental and epidemiological evidence does not indicate that the artificial sweetener, by itself, is carcinogenic but it may be a promoter or cocarcinogen in the presence of other substances."

These mixed findings could delay approval of the product, banned since 1969. Its complex interaction with other substances needs further study, the NAS panel urged.

The report does not compare the banned sweetener with those of the other two artificial sweeteners now approved by the Food and Drug Administration (FDA). But a 1982 NAS review found that aspartame was non-carcinogenic and a 1978 review found that saccharin is a weak carcinogen and promoter in animals.

The new NAS report, requested by the FDA, says that the findings of two 1969 rat studies — which found an association between cyclamate and cancer — have not been repeated. Moreover, newer and better studies show no such link, it says. The panel recommended, however, repetition of some animal studies showing a promotional or cocarcinogenic effect of cyclamate. The findings of human studies were less clear, and more troubling. Two groups appeared to be at increased risk; women nonsmokers and women who used large amounts.

Several other countries — including Canada, France, Germany, and England — still use the artificial sweetener.

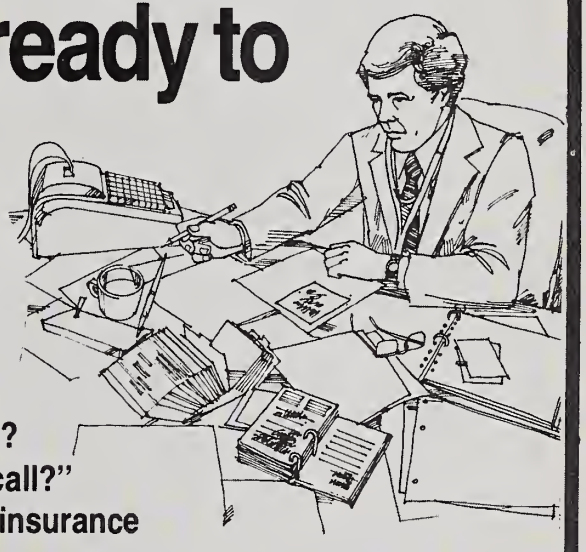
CBO Report Says Many Veterans Will Lose Benefits

The Reagan Administration's plans to change VA eligibility standards would deny hospital and outpatient care to an estimated 655,000 veterans, according to new Congressional Budget Office (CBO) data.

If the proposal is passed by Congress, no longer would the VA continue its 15-year policy of offering unlimited free care for all veterans. Instead, it would use a "means test" to restrict care to non-service-connected veterans.

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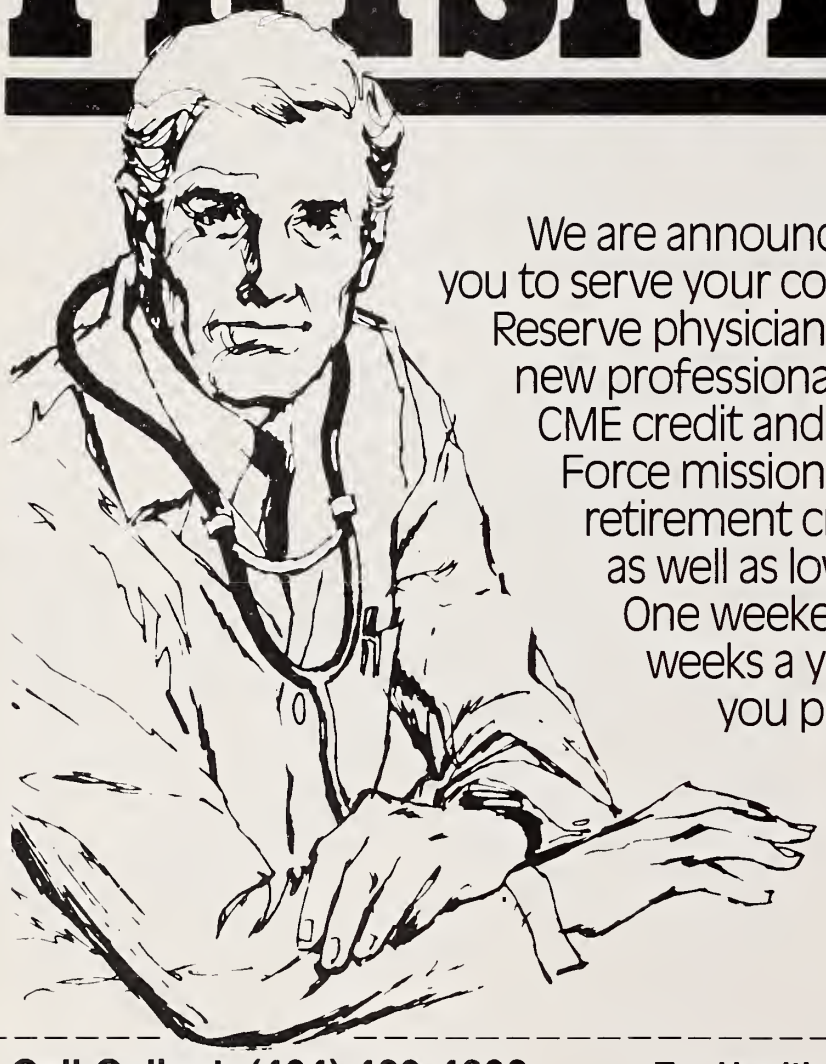
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NORLESTRIN®
(1 mg norethindrone acetate and 50 mcg ethinyl estradiol tablets, USP) 1/50
BECAUSE SOMETIMES A 50 IS PREFERABLE
See next page for brief summary of prescribing information.

Brief Summary of Prescribing Information
NORLESTRIN® (norethindrone acetate and ethinyl estradiol tablets, USP)

See section under **Special Notes on Administration and HOW SUPPLIED.**
Before prescribing, please see full prescribing information. A Brief Summary follows.

DESCRIPTION
Norlestrin Products are progestogen-estrogen combinations.

INDICATIONS AND USAGE
Norlestrin Products are indicated for the prevention of pregnancy in women who elect to use oral contraceptives as a method of contraception.

In clinical trials with Norlestrin 1/50 involving 25,983 therapy cycles, there was a pregnancy rate of 0.05 per 100 woman-years; in clinical trials with Norlestrin 2.5/50 involving 96,388 cycles, there was a pregnancy rate of 0.22 per 100 woman-years.

Dose-Related Risk of Thromboembolism from Oral Contraceptives: Studies have shown a positive association between the dose of estrogens in oral contraceptives and the risk of thromboembolism. It is prudent and in keeping with good principles of therapeutics to minimize exposure to estrogen. The oral contraceptive prescribed for any given patient should be that product which contains the least amount of estrogen that is compatible with an acceptable pregnancy rate and patient acceptance.

CONTRAINDICATIONS
1. Thrombophlebitis or thromboembolic disorders
2. A past history of deep-vein thrombophlebitis or thromboembolic disorders
3. Cerebral vascular or coronary artery disease
4. Known or suspected carcinoma of the breast
5. Known or suspected estrogen-dependent neoplasia
6. Undiagnosed abnormal genital bleeding
7. Known or suspected pregnancy (See WARNING No. 5)
8. Benign or malignant liver tumor which developed during the use of oral contraceptives or other estrogen-containing products.

WARNINGS

Cigarette smoking increases the risk of serious cardiovascular side effects from oral contraceptive use. The risk increases with age and with heavy smoking (15 or more cigarettes per day) and is quite marked in women over 35 years of age. Women who use oral contraceptives should be strongly advised not to smoke.

The use of oral contraceptives is associated with increased risk of several serious conditions including thromboembolism, stroke, myocardial infarction, hepatic adenoma, gallbladder disease, and hypertension. Practitioners prescribing oral contraceptives should be familiar with the following information relating to these risks.

1. *Thromboembolic Disorders and Other Vascular Problems.* An increased risk of thromboembolic and thrombotic disease associated with the use of oral contraceptives is well-established. Studies have demonstrated an increased risk of fatal and nonfatal venous thromboembolism and stroke, both hemorrhagic and thrombotic.

Cerebrovascular Disorders: In a collaborative study in women with and without predisposing causes, it was estimated that the risk of hemorrhagic stroke was 2.0 times greater in users than nonusers, and the risk of thrombotic stroke was 4.0 to 9.5 times greater.

Myocardial Infarction: An increased risk of myocardial infarction associated with oral contraceptives has been reported confirming a previously suspected association. These studies found that the greater the number of underlying risk factors (cigarette smoking, hypertension, hypercholesterolemia, obesity, diabetes, history of preeclamptic toxemia) for coronary artery disease, the higher the risk of developing myocardial infarction, regardless of whether the patient was an oral contraceptive user or not. Oral contraceptives, however, were found to be a clear additional risk factor.

It has been estimated that users who do not smoke (smoking is considered a major predisposing condition to myocardial infarction) are about twice as likely to have a fatal myocardial infarction as nonusers who do not smoke. Oral contraceptive users who are smokers have about a fivefold increased risk of fatal infarction compared to users who do not smoke, but about a tenfold to twelvefold increased risk compared to nonusers who do not smoke. The amount of smoking is also an important factor.

Risk of Dose: In an analysis of data, British investigators concluded that the risk of thromboembolism, including coronary thrombosis, is directly related to the dose of estrogen used in oral contraceptives; however, the quantity of estrogen may not be the sole factor involved.

Persistence of Risk: Two studies have suggested that an increased risk may persist for as long as 6 years after discontinuation of oral contraceptive use for cerebrovascular disease and 9 years for myocardial infarction. In addition, a prospective study suggested the persistence of risk for subarachnoid hemorrhage.

Estimate of Excess Mortality from Circulatory Diseases: The risk of diseases of the circulatory system is concentrated in older women, in those with a long duration of use, and in cigarette smokers.

A study of available data from a variety of sources concluded that the mortality associated with all methods of birth control is low and below that associated with childbirth, with the exception of oral contraceptives in women over 40 who smoke.

The risk of thromboembolic and thrombotic diseases associated with oral contraceptives increases with age after approximately age 30 and, for myocardial infarction, is further increased by hypertension, hypercholesterolemia, obesity, diabetes, or history of preeclamptic toxemia, and especially by cigarette smoking.

The physician and the patient should be alert to the earliest manifestations of thromboembolic and thrombotic disorders. Should any occur or be suspected, the drug should be discontinued immediately.

A fourfold to sixfold increased risk of postsurgery thromboembolic complications has been reported in users. If feasible, oral contraceptives should be discontinued at least four weeks before surgery of a type associated with an increased risk of thromboembolism or prolonged immobilization.

2. *Ocular Lesions.* Neuro-ocular lesions, such as optic neuritis or retinal thrombosis, have been associated with the use of oral contraceptives. Discontinue the oral contraceptive if there is unexplained sudden or gradual, partial, or complete loss of vision; onset of proptosis or diplopia; papilledema; or retinal vascular lesions.

3. *Carcinoma.* Long-term continuous administration of estrogen in certain animal species increases the frequency of carcinoma of the breast, cervix, vagina, and liver.

In humans, an increased risk of endometrial carcinoma associated with the prolonged use of exogenous estrogen in postmenopausal women has been reported. However, there is no evidence suggesting increased risk of endometrial cancer in users of conventional combination or progestogen-only oral contraceptives.

Studies found no evidence of increase in breast cancer in women taking oral contraceptives; however, an excess risk in users with documented benign breast disease was reported.

There is no confirmed evidence of an increased risk of cancer associated with oral contraceptives. Close clinical surveillance of users is, nevertheless, essential. In cases of undiagnosed persistent or recurrent abnormal vaginal bleeding, appropriate diagnostic measures should be taken to rule out malignancy. Women with a strong family history of breast cancer, or who have breast nodules, fibrocystic disease, or abnormal mammograms, should be monitored with particular care.

4. *Hepatic Tumors.* Benign hepatic adenomas have been found to be associated with oral contraceptives. Because hepatic adenomas may rupture and may cause death through intra-abdominal hemorrhage, they should be considered in women presenting abdominal pain and tenderness, abdominal mass, or shock.

A few cases of hepatocellular carcinoma have been reported in women taking oral contraceptives. The relationship of these drugs to this type of malignancy is not known at this time.

5. *Usage in or Immediately Preceding Pregnancy. Birth Defects in Offspring, and Malignancy in Female Offspring.* During early pregnancy, female sex hormones may seriously damage the offspring.

An increased risk of congenital anomalies, including heart defects and limb defects, has been reported with the use of oral contraceptives in pregnancy.

There is some evidence that triploidy and possible other types of polyploidy are increased among abortuses from women who become pregnant soon after ceasing oral contraceptives.

Pregnancy should be ruled out before continuing an oral contraceptive in any patient who has missed two consecutive menstrual periods. If the patient has not adhered to the schedule, the possibility of pregnancy should be considered at the time of the first missed period, and oral contraceptives should be withheld until pregnancy has been ruled out. If pregnancy is confirmed, the patient should be apprised of the potential risks to the fetus and the advisability of continuation of the pregnancy should be discussed.

Women who discontinue oral contraceptives with the intent of becoming pregnant should use an alternate form of contraception for a period of time before attempting to conceive.

Administration of progestogen-only or progestogen-estrogen combinations to induce withdrawal bleeding should not be used as a test of pregnancy.

6. *Gallbladder Disease.* Studies report an increased risk of surgically confirmed gallbladder disease in users of oral contraceptives.

7. *Carbohydrate and Lipid Metabolic Effects.* Because decreased glucose tolerance has been observed in a significant percentage of patients, prediabetic and diabetic patients should be carefully observed while receiving oral contraceptives.

An increase in triglycerides and total phospholipids has been observed.

8. *Elevated Blood Pressure.* An increase in blood pressure has been reported in patients receiving oral contraceptives. The prevalence in users increases with longer exposure. Age is also strongly correlated with development of hypertension. Women who previously have had hypertension during pregnancy may be more likely to develop elevation of blood pressure.

9. *Headache.* Onset or exacerbation of migraine or development of headache of a new pattern which is recurrent, persistent, or severe, requires discontinuation of oral contraceptives.

10. *Bleeding Irregularities.* Breakthrough bleeding, spotting, and amenorrhea are frequent reasons for patients discontinuing oral contraceptives. In breakthrough bleeding, nonfunctional causes should be borne in mind. In undiagnosed abnormal bleeding from the vagina, adequate diagnostic measures are indicated to rule out pregnancy or malignancy.

Women with a past history of oligomenorrhea or secondary amenorrhea, or young women without regular cycles should be advised that they may have a tendency to remain anovulatory or to become amenorrheic after discontinuation of oral contraceptives.

11. *Ectopic Pregnancy.* Ectopic as well as intrauterine pregnancy may occur in contraceptive failures.

12. *Breast-Feeding.* Oral contraceptives may interfere with lactation. Furthermore, a small fraction of the hormonal agents in oral contraceptives has been identified in the milk of mothers receiving these drugs.

PRECAUTIONS
1. A complete medical and family history should be taken prior to the initiation of oral contraceptives. The pretreatment and periodic physical examinations should include special reference to blood pressure, breasts, abdomen, and pelvic organs, including Papanicolaou smear and relevant laboratory tests. As a general rule, oral contraceptives should not be prescribed for longer than one year without another examination.
2. Preexisting uterine leiomyomata may increase in size.
3. Patients with a history of psychic depression should be carefully observed and the drug discontinued if depression recurs to a serious degree.
4. Oral contraceptives may cause fluid retention and should be prescribed with caution, and only with careful monitoring, in patients with conditions which might be aggravated.
5. Patients with a past history of jaundice during pregnancy have an increased risk of recurrence of jaundice. If jaundice develops, the medication should be discontinued.
6. Steroid hormones may be poorly metabolized and should be administered with caution in patients with impaired liver function.
7. Users may have disturbances in normal tryptophan metabolism, which may result in a relative pyridoxine deficiency.
8. Serum folate levels may be depressed.
9. The pathologist should be advised of oral contraceptive therapy when relevant specimens are submitted.
10. Certain endocrine and liver function tests and blood components may be affected. (a) Increased sulfobromophthalein retention. (b) Increased prothrombin and factors VII, VIII, IX, and X; decreased antithrombin 3; increased norepinephrine-induced platelet aggregability (c) Increased thyroid-binding globulin (TBG) leading to increased circulating total thyroid hormone. (d) Decreased pregnanediol excretion. (e) Reduced response to metyrapone test.

Drug Interactions: Reduced efficacy and increased incidence of breakthrough bleeding have been associated with concomitant use of rifampin. A similar association has been suggested with barbiturates, phenylbutazone, phenytoin sodium, tetracycline, and ampicillin.

ADVERSE REACTIONS
An increased risk of the following serious adverse reactions has been associated with oral contraceptives: thrombophlebitis; pulmonary embolism; coronary thrombosis; cerebral thrombosis; cerebral hemorrhage; hypertension; gallbladder disease; benign hepatomas; congenital anomalies.

There is evidence of an association between the following conditions and the use of oral contraceptives, although additional confirmatory studies are needed: mesenteric thrombosis, neuro-ocular lesions, eg, retinal thrombosis and optic neuritis.

The following adverse reactions have been reported in patients receiving oral contraceptives and are believed to be drug related: nausea and/or vomiting, usually the most common adverse reactions, occur in approximately 10% or less of patients during the first cycle. Other reactions, as a general rule, are seen much less frequently or only occasionally: gastrointestinal symptoms; breakthrough bleeding; spotting; change in menstrual flow; dysmenorrhea; amenorrhea during and after treatment; temporary infertility after discontinuance of treatment; edema; chloasma or melasma; breast changes; change in weight; change in cervical erosion and cervical secretion; possible diminution in lactation when given immediately postpartum; cholestatic jaundice; migraine; increase in size of uterine leiomyomata; rash (allergic); mental depression; reduced tolerance to carbohydrates; vaginal candidiasis; change in corneal curvature; intolerance to contact lenses.

The following adverse reactions have been reported and the association has been neither confirmed nor refuted: premenstrual-like syndrome; cataracts; changes in libido; chorea; changes in appetite; cystitis-like syndrome; headache; nervousness; dizziness; hirsutism; loss of scalp hair; erythema multiforme; erythema nodosum; hemorrhagic eruption; vaginitis; porphyria.

Special Notes on Administration
Menstruation usually begins two or three days, but may begin as late as the fourth or fifth day, after discontinuing medication.

After several months on treatment, bleeding may be reduced to a point of virtual absence; reduced flow may be a result of medication and not indicative of pregnancy.

HOW SUPPLIED
Norlestrin 21 1/50 is available in compacts each containing 21 tablets. Each tablet contains 1 mg of norethindrone acetate and 50 mcg of ethinyl estradiol. Available in packages of five compacts and packages of five refills.

Norlestrin 21 2.5/50 is available in compacts each containing 21 tablets. Each tablet contains 2.5 mg of norethindrone acetate and 50 mcg of ethinyl estradiol. Available in packages of five compacts and packages of five refills.

Norlestrin Fe 1/50 is available in compacts each containing 21 yellow tablets and 7 brown tablets. Each yellow tablet contains 1 mg of norethindrone acetate and 50 mcg of ethinyl estradiol. Each brown tablet contains 75 mg of ferrous fumarate, USP. Available in packages of five compacts and packages of five refills.

Norlestrin FE 2.5/50 is available in compacts each containing 21 pink tablets and 7 brown tablets. Each pink tablet contains 2.5 mg of norethindrone acetate and 50 mcg of ethinyl estradiol. Each brown tablet contains 75 mg of ferrous fumarate, USP. Available in packages of five compacts and packages of five refills.

Norlestrin 28 1/50 is available in compacts each containing 21 yellow tablets and 7 white inert tablets. Each yellow tablet contains 1 mg of norethindrone acetate and 50 mcg of ethinyl estradiol. Available in packages of five compacts and packages of five refills.

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Journal Wins First Place . . . Again!



Mrs. Ann Smith (left) of Tifton, Immediate Past President of the Auxiliary to the MAG, receives the first place award given to the Journal *for its April, 1985, issue, which was judged the best publication of a state medical society/association devoted entirely to auxiliary activities. The award was presented by AMA Auxiliary President Billie Brady at the annual meeting last April.*

FIRST PLACE was awarded to the *Journal of the Medical Association of Georgia* in a nationwide competition of medical association publications sponsored by the American Medical Association Auxiliary. This is the 2nd year in a row that the *Journal* has received this award.

The award was presented to Mrs. Robley Smith, Immediate Past President of the MAG Auxiliary, at the annual session of the House of Delegates of the AMA-Auxiliary in Chicago on June 19.

The *Journal* won best in the nation for its April, 1985, issue in the category entitled, "Publications of State Medical Associations devoted entirely to Auxiliary activities." There were four times as many publications competing in this category this year as last. Six people judged the publications on the basis of subject matter, originality, style, writing quality, readability, use of graphics, visual appeal, and organization. The judges were selected from among editors, writers, and graphic artists within the Chicago area. All judges commented on the excellence of the entries submitted.

Many auxilians contributed to this awarding-winning issue of the *Journal;* Mrs. Brit Gay (Evelyn) was the guest editor. Mrs. William Tippins (Barbara), newly elected president-elect of the Auxiliary, and Mrs. Susan Dillon, Managing Editor of the *Journal,* were also instrumental in publishing this superior issue. Our congratulations to everyone for a job well done!

MEDICAL MEETING CALENDAR

AUGUST

15-18—*St. Simons Island:* **Georgia Psychiatric Association Meeting.** Category 1 credit. Contact James Moffett, MAG, 938 Peachtree St., Atlanta 30309. PH:404/876-7535 or 1-800-282-0224 (toll free in Ga.).

18—*Atlanta:* **MAG Risk Management Series I Seminar.** Category 1 credit. Contact Hoyt Torras, MAG, 938 Peachtree St., Atlanta 30309. PH:404/876-7535 or 1-800-282-0224 (toll free in Ga.).

24-25—*Callaway Gardens:* **Georgia Society of Anesthesiologists and Alabama Society of Anesthesiologists.** Category I credit. Contact William Hammonds, MD, Secy-Treas., GSA, Emory Univ. Hosp., Dept. of Anesth., 1364 Clifton Rd., NE, Atlanta 30322. PH:404/321-0111.

30-September 1—*Sea Island:* **American College of Physicians.** Contact Malcolm Page, MD, MCG, Augusta 30912. PH:404/828-0211 Ext. 4018.

SEPTEMBER

5-8—*Ponte Vedra, FL:* **Georgia Thoracic Society Tri-State Meeting.** Contact Edwin Kramer, Amer. Lung Assn., Ga. Div., 2452 Spring Rd., Smyrna 30080. PH:404/434-5864.

9-13—*Atlanta:* **Magnetic Resonance Imaging.** Category 1 credit. Contact Office of CME, Emory Univ. Sch. of Med., 1440 Clifton Rd., Atlanta 30322. PH:404/329-5695.

15-18—*Sea Island:* **Georgia State OB/GYN Society Meeting.** Contact Ralph Tillman, MD, Pres., Ga. State OB/GYN Society, 5040 Snapfinger Woods Dr., Ste. 204, Decatur 30035. PH:404/981-1123.

15-18—*Sea Island:* **Georgia Urological Association.** Category 1 credit. Contact Jack Amie, M.D., Secy/Treas., GUA, 2418 Parkwood Dr., Brunswick, GA 31520.

18-20—*Savannah:* **Neonatology — The Sick Newborn.** AMA Category 1 and AAFP prescribed credit. Contact Div. of Cont. Ed., MCG, Augusta 30912. PH:404/828-3967.

19-21—*Sea Island:* **Georgia Surgical Society Meeting.** Category 1 credit. Contact William McGarity, MD, Secy-Treas., GSS, Emory Univ. Clinic, 1365 Clifton Rd., NE, Atlanta 30322. PH:404/321-0111 Ext. 3322.

26-28—*Hilton Head Island, SC:* **Frontiers in Nutrition.** AMA Category 1 and AAFP prescribed credit. Contact Div.of Cont. Ed., MCG, Augusta 30912. PH: 404/828-3967.

OCTOBER

2-3—*Atlanta:* **Georgia Chapter, Amer. Acad. of Pediatrics Fall Meeting.** Category 1 credit. Contact William Mankin, Exec. Secy., Ga. Chapter, AAP., 4059 Land O'Lakes Dr., Atlanta 30342. PH:404/237-3922.

4—*Atlanta:* **The Brain and the Heart: Clinical Interactions in Cardiovascular Disease.** Category 1 credit. Contact Office of CME, Emory Univ. Sch. of Med., 1440 Clifton Rd., Ste. 110, Atlanta 30322. PH:404/329-5695.

16-19—*Hilton Head Island, SC:* **Recent Developments in the Clinical Management of Diabetes and Endocrine Disorders.** Category 1 and AAFP prescribed credit. Contact Edwin Bransome, Jr., MD, Dept. of Medicine, MCG, Augusta 30912. PH:404/828-3445.

17-18—*Atlanta:* **Current Issues in Reproductive Health.** Category 1 credit. Contact Office of CME, Emory Univ. Sch. of Med., 1440 Clifton Rd., Ste. 110, Atlanta 30322. PH:404/329-5695.

17-20—*Sea Island:* **Georgia Orthopaedic Society.** Contact William Collins, MD, Secy-Treas., Ga. Orthopaedic Society, 993-C Johnson Ferry Rd., NE, Atlanta 30342. PH:404/255-4582.

19-20—*Atlanta:* **American Acad. of Facial Plastic & Reconstructive Surgery.** Contact AAFPRS, 1101 Vermont Ave., NW, Ste. 304, Washington, DC 20005. PH:202/842-4500.

19-20—*Callaway Gardens:* **Georgia Gastroenterologic Society.** Category 1 credit. Contact Joe Griffin, Jr., MD, Vice Pres., GGS, G. I. Med., BIW 558, MCG, Augusta 30912. PH:404/828-2238.

20-24—*Atlanta:* **Amer. Acad. of Otolaryngology — Head and Neck Surgery.** Contact AAOHNS, 1101 Vermont Ave., Ste. 302, Washington, DC 20005. PH:202/289-4607.

23-25—*Atlanta:* **Neuroradiology Update — 1985.** Category 1 credit. Contact Office of CME, Emory Univ. Sch. of Med., 1440 Clifton Rd., Ste. 110, Atlanta 30322. PH:404/329-5695.

25-26—*Savannah:* **Georgia Society of Internal Medicine Annual Meeting.** Contact Albert Carr, MD, MCG, Augusta 30912. PH:404/828-2736.

NOVEMBER

1—*Atlanta:* **Endometriosis Update.** Category 1 and AAFP prescribed credit. Contact Amir H. Ansari, MD, Dir., Dept. OB/GYN, Ga. Baptist Med. Ctr., 340 Boulevard, Ste. 641, Atlanta 30312. PH:404/653-4767.

11-15—*Augusta:* **Obstetrics and Gynecology.** Category 1 credit. Contact Div. of Cont. Ed., MCG, Augusta 30912. PH:404/828-3967.

14-16—*Atlanta:* **Georgia Acad. of Family Physicians Annual Meeting.** Contact Camille Day, GAFP, 11 Corporate Square, Ste. 205, Atlanta 30329. PH:404/321-7445.

21-24—*Atlanta:* **From Head to Toes: A Practical Approach to Orthopaedics for the Primary Care Physician.** Category 1 credit. Contact Office of CME, Emory Univ. Sch. of Med., 1440 Clifton Rd., Atlanta 30322. PH:404/329-5695.

22-24—*Atlanta:* **MAG Scientific Assembly.** Category 1 credit. Contact Stephen Davis, MAG, 938 Peachtree St., Atlanta 30309. PH:404/876-7535 or 1-800-282-0224 (toll free in Ga.).

DECEMBER

4-6—*Atlanta:* **Techniques in Orthopaedic Surgery: Total Knee Replacement.** Category 1 credit. Contact Office of CME, Emory Univ. Sch. of Med., 1440 Clifton Rd., Atlanta 30322. PH:404/329-5695.

4-8—*Atlanta:* **10th Annual Southeastern Conference on Alcohol and Drug Abuse.** Contact Charter Med. Corp., Addictive Disease Div., 5780 Peachtree-Dunwoody Rd., Ste. 170, Atlanta 30342. PH:404/257-9333.

6-7—*Atlanta:* **A Basic Course in Phacoemulsification and Extracapsular Cataract Extraction with Posterior Chamber Lens Implantation.** Category 1 credit. Contact Ginger Lineberger, Found. Coord., The Hallum-Arnold Eye Found., Inc., 3280 Howell Mill Rd., Ste. 104, Atlanta 30327. PH:404/351-2713.

7-8—*Atlanta:* **Regional Anesthesia: Surgery, Obstetrics, and Pain.** Category 1 credit. Contact Office of CME, Emory Univ. Sch. of Med., 1440 Clifton Rd., Ste.110, Atlanta 30322. PH:404/329-5695.

—President's Letter—



The Day of the Bold Weevil

"Summertime — and the living is easy.
Fish are jumping and the cotton is high."

THE REFRAIN of this old song paints a picture of the long, hot, summer days in the South. After recovering from the anguish of that well remembered civil conflict, there were several decades when grace and graciousness abounded in the land, and, indeed, the cotton *was* high.

There had not been much change in living styles and no immediate indication of such. No brilliant wealth presented, but most folks used their richness in a soft and gentle life far from the fast track.

But then, out of the West came those little "boll weevils" that attacked the very heart of the Southland, and where there had been a stable, easy living, hard times came quickly. The basic economy faltered, and it became obvious that the "one-crop" standard was no longer reliable. Changes were made. Those who did change could survive, and those who didn't remained frustrated or failed.

Perhaps the analogy is tenuous, but I remember the "Golden Age of Medicine" which has existed since the discovery of penicillin in the 1930s.

Advances, yes, almost miracles, have come quickly. Doctors have been heroes and practically saints. Our good deeds and caring abound in the land.

There has been money to spend and time off available for our pleasures. Yes, they have been the bright, warm days of medicine, and we have truly been in "high cotton." There has been no indication for change.

But — out of somewhere came those big (BOLD) suckers such as Pru and Blu, and Cig and Kay, and don't forget the "H-Boys — Huma, Hickey, and Ho-Cor."* They are attacking the very heart of medicine. There doesn't seem to be much concern with the doctor-patient relationship or professionalism — they just bore in there to save (or make) money.

There is another old song from the past that goes —

"The farmer asked the boll weevil why he was there, and the boll weevil answered, 'We're just looking for a home.'"

I think some of the new bold weevils have also found a home.

Medicine will not continue as we have known it in the past. There is no one-way standard any more. Those who can adjust to these changes will survive, and some may prosper. Those who cannot may find difficulty and frustration.

The day of the "Bold Weevil" has come again.

Wm. D Logan Jr.

William D. Logan, Jr., M.D.

*Any reference to Prudential, Blue Cross-Blue Shield, Cigna, Kaiser, Humana, H.F.C.A., and Hospital Corporation is purely intentional.

Health and Demographic Characteristics of Georgia: Rural/Urban and North/South

J. Stephen Wright, Ph.D., Owen F. Gaede, Ph.D., Dale W. Lick, Ph.D.

WHAT EXACTLY is the state of health in rural Georgia? Is it true that the clean air and good living in the country cause residents to be healthier and to live longer? Or, are rural residents really in poorer health than their metropolitan counterparts? In this report, we will attempt to answer these questions using a statistical analysis of public health data, previous studies and research, and U.S. Census data for the 159 counties of Georgia.

In this report, the authors attempt to answer several questions about the state of health in rural Georgia using a statistical analysis of public health data, previous studies and research, and U.S. Census data for the 159 counties of Georgia.

Methods

The purpose of this study was to determine differences in health-related data between rural and urban Georgia and between north and south Georgia. It is primarily intended to be a profile of characteristics coupled with some correlation analyses. Certainly, this attempt to explore the relationship between health status and such characteristics as health manpower and demographics is only a beginning step.

For the purposes of this report, each county in Georgia was classified as either rural (non-metropolitan) or urban (metropolitan) based upon the 1980 Standard Metropolitan Statistical Areas (SMSA) as defined by the U.S. Bureau of the Census.[1] Those counties designated Standard Metropolitan Statistical Areas were defined as urban and the remaining non-SMSA counties as rural. Figure 1 illustrates the distribution of 1980 SMSA and non-SMSA counties.

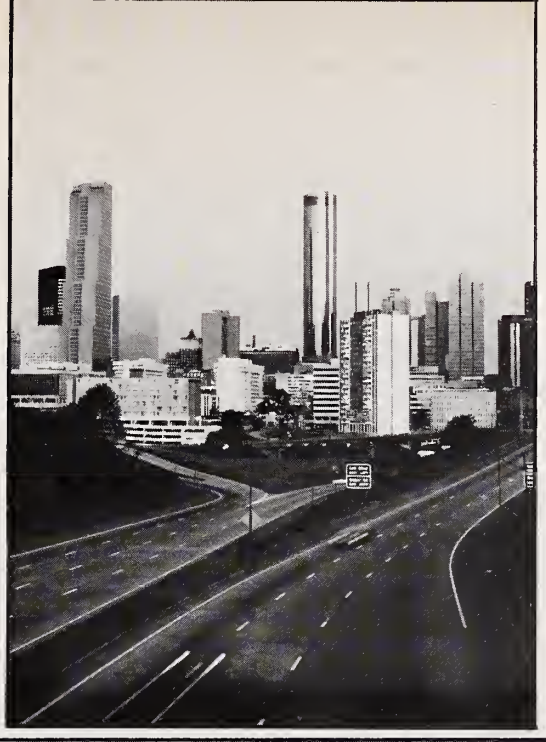
In addition to an examination of the differences between urban and rural areas of the state, the authors examined the differences existing between north and south Georgia. The state was divided into two parts by a line running from Augusta west southwest to Columbus (Figure 1). While this division is somewhat arbitrary, this line closely follows the "fall line" and roughly divides the coastal plains of southern Georgia from the piedmont of northern Georgia.

Data were gathered for each of the 159 counties in Georgia on 29 variables related to educational level, age, poverty levels, mortality, and the availability of health professionals. Table 1 lists the variables which were examined, the type of statistic used, and the source and date for each of these variables.

It should be pointed out that no attempt was made to age/race adjust the mortality data. The reason was two-fold. First, adjusting would mask the numerical burden of the actual death rate and its relationship to the need for health care services for the respective population. Second, it was possible to determine the association between mortality and age and race which, in at least one case (stroke deaths), revealed an unexpected result.

In this study, each county is considered a "case" representing that county as a whole. In some instances, the mean of county medians was examined. This approach requires some caution in interpretation, as the influence of counties with low population tends to be exaggerated in comparison to more densely populated counties. Despite these limitations, there are clear trends in the data suggesting that the health status in rural Georgia is significantly lower than in urban Georgia and still lower in southern rural Georgia.

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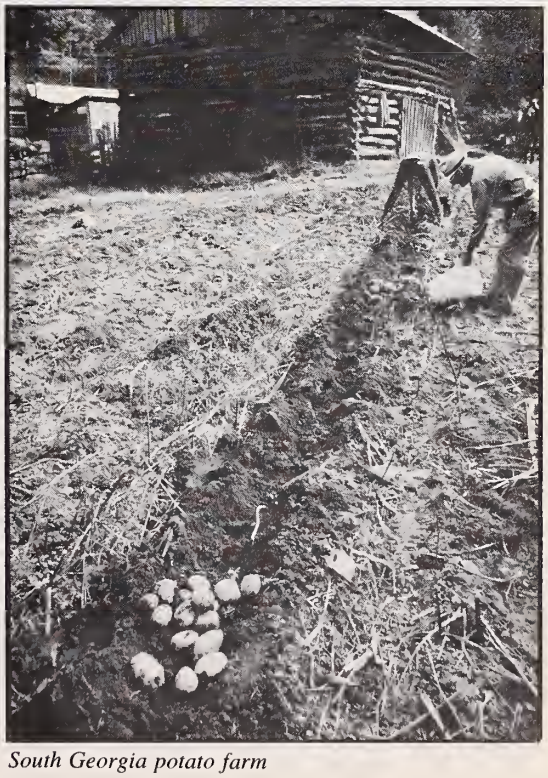
Atlanta skyline



Savannah waterfront

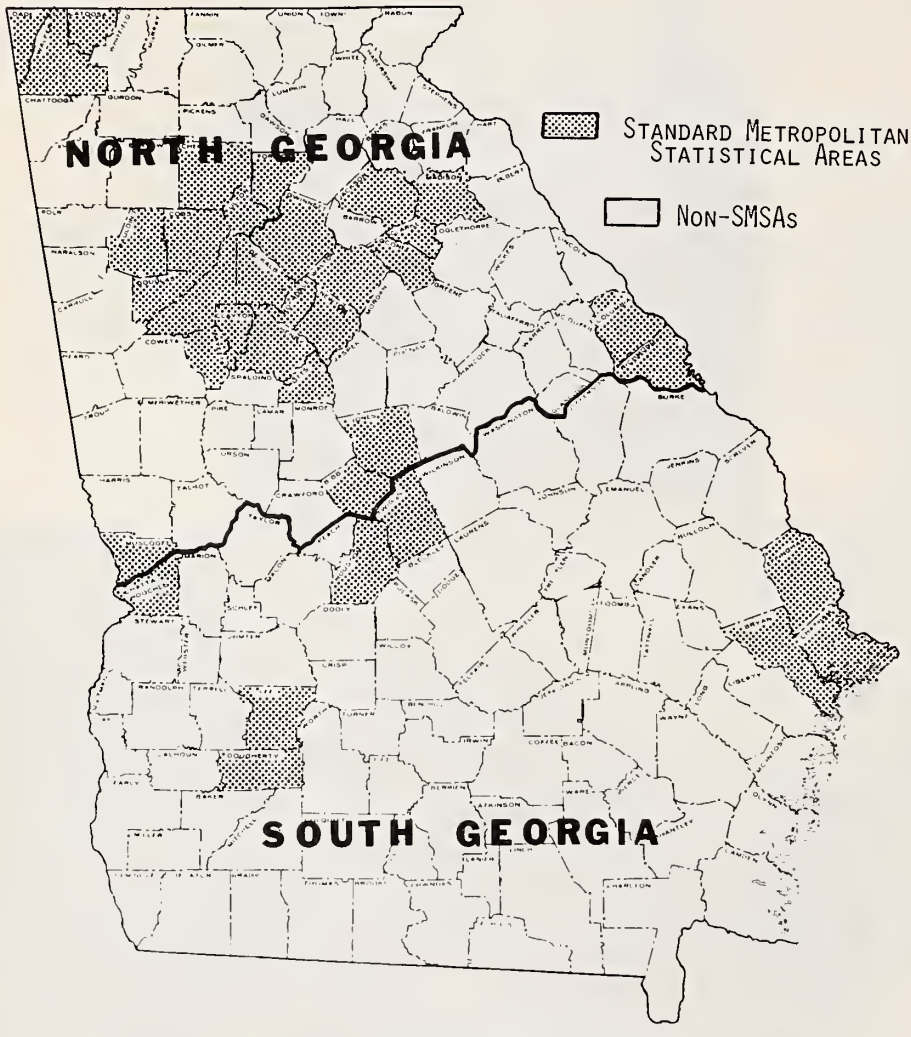


Demorest, in north Georgia



South Georgia potato farm

The Many Faces of Georgia



Metropolitan/non-metropolitan and North/South Georgia, 1980

The means for each of the variables was computed for the state as a whole, for north and south Georgia, and for urban and rural counties. Analysis of variance techniques were used to examine the statistical significance of the differences in variable means between north and south Georgia counties and between urban and rural Georgia counties. Additionally, Pearson correlation coefficients were computed between all variables in the study in an attempt to identify some of the more significant relationships between variables.

Results: Rural and Urban Georgia

A Comparison of the County Means

Table 2 summarizes the differences between the means of the urban counties and the means of the rural counties for each variable in the study. The last column in the table lists the probability (p) of the differences between these means being due to chance alone. Probabilities greater than 5% have been marked as not significant (NS).

Educational level. It is immediately apparent that the educational level in rural Georgia is significantly lower than in urban Georgia. The means for all of the educational factors examined are significantly lower for rural counties than for urban counties ($p < 0.01$).

In addition, the educational level for blacks was considerably lower than that of whites in both urban and rural settings. For example, in urban counties, on the average, 39.9% of black adults were high school graduates, as compared with 60.8% of the whites. In rural counties, only 27.7% of black adults were high school graduates, compared with 48.4% of the whites. Similar findings apply to the median number of years of schooling completed.

Age distribution. The mean of the median age for both males and females was higher for rural counties than for urban counties, but curiously the difference is only significant for females. It can also be seen that the percent of the population over 65 years of age follows this trend: the mean for urban counties was 8.0% of the population over 65, while for rural counties the mean was 12.2% ($p < .001$). In summary, then, we can say that rural counties tend to have an older population.

Poverty levels. Two statistics were used as a general indication of the economic status of a county: the percent of the population with annual incomes less than the federally-defined poverty level and the percent with incomes less than twice (200%) the poverty level. Again, it is clear that economic conditions in rural areas are far worse than in urban areas. The mean poverty level for urban counties was 13.6%, while for rural areas it was 22.3%, a difference significant beyond the 0.01 level. For those falling under 200% of poverty level, we find 35.4% in urban areas and 49.7% in rural areas, again significant beyond the 0.01 level.

Almost 85% of the rural counties (105) are classified as Medically Underserved Areas.

As with education, blacks fare far worse economically in both urban and rural areas, but again, urban blacks are better off than rural blacks. For urban counties, the mean of the percentage of blacks below poverty level was 28.0%, whereas for rural coun-

ties the mean was 40.1%. In the under 200% of poverty level category, we find 61.6% for urban areas and 73.5% for rural areas. As with the variables measuring educational level, all of the differences in poverty variables between rural and urban counties were in one direction — favoring urban counties — and the differences were all statistically significant ($p < 0.001$).

Health care professionals. An extremely important part of the health system is the person who provides the care and the access that residents have to those health care providers. Rural people have long had problems with accessibility, primarily because providers simply have not been available in sufficient numbers to meet the needs. In this section, we will look at the availability of different types of health professionals which are of particular interest to rural areas.

In each of the four professions studied, urban areas had greater numbers of health care professionals per unit population. There were nearly 60% more (88.2 vs. 55.8 per 100,000) physicians in urban counties than in rural counties and nearly twice as many dentists (36.2 vs. 19.8 per 100,000) in urban counties. The data in Table 2 show 56% more nurses, 99% more nurses with bachelor's degrees, and 55% more nurses actually employed in nursing in urban counties than in rural counties.

The education level in rural Georgia is significantly lower than in urban Georgia.

The federal government has recognized the shortages of health manpower in rural Georgia by designating more than half of the counties as Primary Care Manpower Shortage Areas and as Dental Care Manpower Shortage Areas (63 and 64 counties, respectively, of the 124 rural counties).[2] Almost 85% of the rural counties (105) are classified as Medically Underserved Areas.[3]

Table 1 — Variables Examined for Each County in Georgia

Variable	*Year*	*Source*
Percent of population over 65 years of age	1980	1
Median age of males	1980	1
Median age of females	1980	1
Percent of whites under the poverty level	1980	1
Percent of blacks under the poverty level	1980	1
Percent of whites under 200% poverty level	1980	1
Percent of blacks under 200% poverty level	1980	1
Percent of white adults with HS diplomas	1980	1
Percent of black adults with HS diplomas	1980	1
Median years of schooling (adult whites)	1980	1
Median years of schooling (adult blacks)	1980	1
Total population	1980	1
Number of males	1980	1
Number of females	1980	1
Median years of schooling (total population)	1980	1
Physicians* per 100,000 population	1980	2
Primary care physicians* per 100,000 population	1980	2
Dentists* per 100,000 population	1979	2
Registered nurses* per 100,000 population	1979	2
Nurses* with a BS in nursing as highest degree	1979	2
Nurses employed in nursing* per 100,000 population	1979	2
Deaths per 100,000 population	1980	3
Heart disease deaths per 100,000 population	1980	3
Cancer deaths per 100,000 population	1980	3
Cerebrovascular disease deaths per 100,000 population	1980	3
Respiratory disease deaths per 100,000 population	1980	3
Motor vehicle accident deaths per 100,000 population	1980	3
Other accidental deaths per 100,000 population	1980	3
Infant deaths per 1,000 live births	1980	3

1 = United States Bureau of the Census, 1980.
2 = Georgia Center for Health Statistics, 1980, 1979.
3 = Georgia Department of Human Resources, 1980.
* Total number of licensed or registered health professionals.

Mortality rates. There appears to be almost a consensus opinion that rural living is healthy for the individual and makes one stronger and happier. While this may not be totally untrue, statistical evidence suggests that equating rural residence with health is a myth. Actually, there is much recent evidence that indicates rural Georgians suffer from a heavy burden of chronic diseases.

By looking at the mortality data in Table 2, we find a much higher mortality rate in rural Georgia than in metropolitan areas. In 1980, the rural crude mortality rate was 47% greater than the urban rate. This is dramatically different from the findings of Sauer et al.[4] in the 1950s study in which the urban crude mortality rate for whites 45-64 years of age was actually 12% higher than the non-metropolitan rate. Contributing to the higher metropolitan mortality rate in this age/race group was cardiovascular disease and coronary heart disease (12% and 30% higher in urban than in rural areas, respectively).

Since the 1950s, there has been a complete reversal in the pattern of deaths as noted above in the more recent higher rural rate. In addition to the crude mortality rate, many specific causes of death have a higher non-metropolitan rate than the metropolitan rate. Of the causes of death listed in Table 2, the difference between the urban and the rural mean mortality rate is significant for all but motor vehicle accidents, and even in that case the rural rate is higher. The rural mortality rate exceeds the urban

Table 2 — Comparison of Demographic and Health Factors in Rural and Urban Georgia

Variable	*Urban*	*Rural*	*p*
Educational Factors			
Percent white high school graduates	60.8	48.4	0.000
Percent black high school graduates	38.9	27.7	0.000
Percent total high school graduates	55.8	40.7	0.000
Median years of school (whites)	12.3	11.7	0.000
Median years of school (blacks)	9.5	7.3	0.006
Median years of school (total)	11.8	10.7	0.000
Age Distribution			
Median age of males (years)	27.3	28.0	NS
Median age of females (years)	29.1	31.1	0.000
Percent of population over 65 years	8.0	12.2	0.000
Poverty Distribution			
Percent whites below poverty level	9.4	15.0	0.000
Percent blacks below poverty level	28.0	40.1	0.000
Percent of total population below poverty level	13.6	22.3	0.000
Percent whites below 200% of poverty level	28.4	39.4	0.000
Percent blacks below 200% of poverty level	61.6	73.5	0.000
Percent total population below 200% of poverty level	35.4	49.7	0.000
Health Care Professionals (per 100,000 population)			
Physicians	88.2	55.8	0.003
Primary care physicians	41.8	36.4	NS
Dentists	36.2	19.8	0.000
Registered nurses	378.6	242.0	0.000
Nurses with BSN as highest degree	54.2	27.2	0.000
Nurses employed in nursing	301.6	195.2	0.000
*Mortality Rates**			
Crude deaths	678.6	999.4	0.000
Heart disease deaths	230.4	351.6	0.000
Cancer deaths	131.8	176.8	0.000
Cerebrovascular deaths	66.4	111.8	0.000
Respiratory disease deaths	42.6	58.0	0.005
Motor vehicle accident deaths	29.6	33.4	NS
Other accidental deaths	21.4	35.6	0.000
Infant mortality	13.3	16.4	NS

NS — Not Significant ($p < 0.05$).
* Infant mortality rate expressed as deaths per 1,000 live births; all other rates expressed per 100,000 population.

mortality rate for the specific causes as follows: heart disease, 52.6%; cancer, 34.1%; cerebrovascular disease, 68.4%; respiratory disease, 36.1%; and other accidental deaths, 66.4%

In recent studies of mortality in rural Georgia, the association between mortality and rurality was confirmed. The crude mortality rate in rural Georgia was significantly higher than the urban rate, even when adjusted for race and age.[5] Of the top 13 causes of death in Georgia, nine categories had significantly higher mortality rates in rural areas than expected. Only homicide was significantly higher in urban counties. No differences were observed in only three of the causes of death. Many of these differences persisted when age-race-cause subcells were analyzed. Moreover, a significant negative correlation was reported between population density and crude death rates in Georgia counties.[6]

The association of rurality with high mortality rates tends to be confirmed by other available information. An examination of the 1980 study[7] by the Georgia Department of Human Resources suggests a similar pattern. This study analyzed mortality data from an age-based perspective, looking at deaths in the different stages of life (by race and sex). The purpose of this study did not include metropolitan status, although by observation of the county-by-county mapping of mortality, a trend of high rural mortality can be discerned in many cases.

Demographic Relationships with Mortality

Mortality in both rural and urban Georgia is associated with age, poverty, and education of the population. In general, the mortality rate increased (1) as the median age increased, (2) as the percent of those in poverty increased, and (3) as the years of schooling decreased.

In certain diseases, there are some differences by sex and race. For example, cancer mortality was found to be directly related to the poverty of whites in urban areas ($r = 0.3815$, $p = 0.013$) but it is related to the poverty of blacks in rural areas ($r = 0.185$, $p = 0.031$). In another example, crude deaths are directly related to median ages of both males ($r = 0.2787$, $p = 0.052$) and females ($r = 0.6336$, $p = 0.001$) in metro counties but only to the median ages of females in rural areas ($r = 0.1654$, $p = 0.033$).

Other interesting relationships were found in this study. Heart disease deaths were found to be negatively correlated in both urban and rural counties with both the percent of adults who were high school graduates ($r = -0.5607$, $p = 0.001$) and with the median years of schooling ($r = -0.3024$, $p = 0.001$). This suggests that heart disease does not predominantly affect upper socioeconomic groups, but is in fact a problem of the population with less formal education.

There were also some unexpected findings related to stroke as a cause of

Table 3 — Relationships Between The Density of Health Care Professionals and Death Rates in Rural and Urban Georgia

Correlation Coefficients

Cause of Death	*Physicians*	*Primary Care Physicians‡*	*Dentists*	*Registered Nurses*	*BSNs*	*Nurses Employed in Nursing*
Heart Disease						
Rural	−.1252	−.0572	−.0609	−.0357	−.1391	−.0559
Urban	+.2860*	+.2793	+.1790	−.1059	−.0334	−.1795
Cancer						
Rural	+.0784	+.1785*	+.0090	+.0214	−.0496	+.0595
Urban	+.2768*	+.3258*	+.2743	−.0465	+.0849	−.0940
Stroke						
Rural	−.1840*	−.1499*	−.1521*	−.0608	−.0878	−.0129
Urban	+.1641	+.1293	+.1926	−.0761	+.0400	−.1271
Respiratory Disease						
Rural	−.0489	−.0270	−.0054	−.0890	−.0216	−.0539
Urban	+.3260*	+.3216*	+.4529*	+.0644	+.1558	+.0249
Motor Vehicle Accidents						
Rural	−.0636	+.0092	+.0233	−.0157	−.1538	−.0674
Urban	−.3739*	−.3336*	−.4018†	−.3232*	−.3735*	−.3004*
Other Accidents						
Rural	−.0188	+.0599	+.1058	−.0349	+.0231	+.0248
Urban	+.3473*	+.3978†	+.2907*	+.1084	+.1248	+.0792
Total Deaths						
Rural	−.1152	−.0434	−.0935	−.1019	−.0591	−.0730
Urban	+.3163*	+.3167*	+.2761	−.0798	+.0296	−.1526
Infant Mortality						
Rural	−.0474	−.0513	−.0896	+.0016	−.0060	−.0108
Urban	+.0209	+.0300	−.1925	−.1508	−.1842	−.1891

* $p < 0.05$
† $p < 0.01$
BSNs — Nurses with a bachelor's degree in nursing as the highest degree.
‡ Primary care physicians — Physicians in general and family practice, obstetrics/gynecology, pediatrics, or internal medicine.

death. In rural counties, there was no significant relationship — as would be expected — between stroke deaths and the median age of either sex. There was, however, a positive correlation between stroke mortality rate and the percent of blacks below the poverty level ($r = 0.2918$, $p = 0.001$) but a negative correlation between stroke deaths and the percentage of blacks completing high school ($r = -0.4080$, $p = 0.001$). While the same relationships were noted for whites in urban areas, there were no significant correlations between educational levels of whites and stroke mortality rates in rural areas.

There were some unexpected relationships between the infant mortality rate and population demographics. The infant mortality rate was found to increase in rural counties as the percentage of whites under 200% of the poverty level decreased ($r = -0.2028$, $p = 0.018$) and in urban counties as the percentage of whites with incomes less than 100% of the poverty level decreased ($r = -0.3504$, $p = 0.021$). The rural infant mortality rate was also positively correlated with the percentage of white high school graduates ($r = 0.2663$, $p = 0.003$) and median years of school for whites ($r = 0.2753$, $p = 0.002$). This is just the reverse of what would be expected and is difficult to explain. Interestingly, in urban counties, there were no significant relationships with educational parameters.

Health Professionals versus Mortality

Correlations were examined between specific causes of death and the rate of physicians, primary care physicians, dentists, registered nurses, registered nurses with a bachelor's degree in nursing (BSN) as the highest degree, and RNs working in nursing. Both the general direction of the relationship (whether significant or not) and the significant correlations that were found were considered. These correlations are summarized in Table 3.

Perhaps the most startling of the results is the relationship of physicians and dentists with mortality rates. In metropolitan areas for crude deaths and for the specific four dis-

Table 4 — Comparison of Demographic and Health Factors in North and South Georgia

Variable	*North*	*South*	*p*
	Educational Factors		
Percent white high school graduates	52.7	49.9	0.020
Percent black high school graduates	32.4	28.7	0.034
Percent total high school graduates	47.6	42.0	0.004
Median years of school (whites)	11.9	11.8	NS
Median years of school (blacks)	7.6	8.0	NS
Median years of school (total)	11.3	10.7	0.012
	Age Distribution		
Median age of males (years)	28.6	27.2	0.003
Median age of females (years)	31.3	30.0	0.000
Percent of population over 65 years	11.1	11.6	NS
	Poverty Level		
Percent whites below poverty level	12.0	15.4	0.000
Percent blacks below poverty level	30.1	43.8	0.000
Percent of total population below poverty level	15.6	24.4	0.000
Percent whites below 200% of poverty level	31.5	41.0	0.000
Percent blacks below 200% of poverty level	63.3	76.9	0.000
Percent total population below 200% of poverty level	39.5	51.8	0.000
	Health Care Professionals per 100,000 Population		
Physicians	71.0	54.8	NS
Primary care physicians	39.4	36.0	NS
Dentists	27.0	20.0	0.039
Registered nurses	294.4	248.8	0.034
Nurses with BSN as highest degree	38.4	27.6	0.034
Nurses employed in nursing	234.4	202.0	NS
	*Mortality Rates**		
Crude deaths	856.8	1002.0	0.010
Heart disease deaths	305.8	344.6	0.014
Cancer deaths	161.0	173.2	NS
Cerebrovascular deaths	89.6	114.2	0.006
Respiratory disease deaths	52.4	56.8	NS
Motor vehicle accident deaths	35.0	30.2	NS
Other accidental deaths	29.4	35.6	0.036
Infant mortality	15.0	16.5	NS

NS — Not Significant ($p > 0.05$)
* Infant mortality rate expressed as deaths per 1,000 live births; all other rates expressed per 100,000 population.

eases analyzed, the mortality rates increased as the rate of total physicians, primary care physicians, and dentists increased. However, the situation appears to be markedly different in rural counties. The crude death rate and death rates from heart disease and stroke actually decreased as more physicians, primary care physicians, and dentists were available.

The urban data support previous findings showing a positive relationship between mortality rates and the rate of physicians available.[8] However, no attempt was made in the previous studies to analyze rural and urban regions separately, thus the inverse relationship in rural counties is a very meaningful finding.

High mortality statistics coupled with an older, poorer, less educated population present a devastating picture of health in rural Georgia.

The relationship between physicians and mortality as reflected by the positive correlation coefficient was significant for crude mortality rates and for three of the four diseases. However, in rural counties there was no significance for crude deaths but a significant negative correlation between heart disease and physicians and between stroke and physicians or dentists.

Nurses were almost always inversely related to mortality rates in

both urban and rural areas. The negative correlation coefficient was present in most of the three overlapping RN categories — total RNs, BSNs, and RNs working in nursing. Positive correlation coefficients were found in limited RN categories for cancer deaths and urban respiratory deaths.

Results: North and South Georgia

In this section, north Georgia and south Georgia statistics are compared in terms of demographics, mortality, and health professionals available. The county means for north and south Georgia were computed for each of the variables, and these are summarized in Table 4, along with the probability that the difference between regional means is due to chance alone.

Educational level. In general, Table 4 shows that persons in north Georgia have attained higher educational levels than their counterparts in south Georgia. The percentage of high school graduates was found to be 47.6% of the adult population in the north, as compared to only 42.0% in south Georgia ($p = 0.004$). In other words, the percentage of high school graduates is 13% greater in north Georgia than in south Georgia.

The median years of schooling completed was 11.3 for north Georgia and 10.7 in south Georgia ($p = 0.012$). Interestingly, the median years of schooling for blacks was slightly higher (8.0 vs 7.6) in south Georgia than in north Georgia, although this difference was not significant. This suggests that the retention rate for blacks is higher in south Georgia elementary schools than in north Georgia, but that the retention rate subsequently drops off significantly during high school. In south Georgia, blacks stay in school longer than in north Georgia, but fewer complete high school.

Age distribution. The difference between north and south Georgia in the percentage of the total population over 65 years of age was not significant; however, there were some interesting differences between the two regions when this variable was broken down by sex. The median age for both males and females is lower in south Georgia than in north Georgia — 27.2 years vs. 28.6 years for males, and 30.0 vs. 31.3 for females. This finding is the opposite of what would be expected considering the higher mortality rates in south Georgia which have been revealed in this study.

. . . there are clear trends in the data suggesting that the health status in rural Georgia is significantly lower than in urban Georgia and still lower in southern rural Georgia.

Poverty levels. Even a quick glance at Table 4 reveals that the differences in economic status between north and south Georgia are highly significant. All six of the economic indicators used in this study clearly show that people in south Georgia are poorer than those in north Georgia. As an example, 24.4 % of south Georgians were found to be under the poverty level in 1980 as compared with 15.6% of north Georgians. South Georgia thus has a poverty rate more than 56% greater than north Georgia. The poverty rate for blacks is almost twice as great than for the population as a whole in both north and south Georgia and is nearly three times the white poverty rate.

Health care professionals. Significantly greater numbers of dentists, registered nurses, and nurses with a bachelor's degree in nursing as the highest degree were found in north Georgia (per unit population).

Mortality rates. The crude death rate was significantly higher in south Georgia than in north Georgia, as were the death rates due to heart disease (344.6 vs. 305.8 per 100,000, respectively), cerebrovascular disease (114.2 vs. 89.6), and other accidental deaths (35.6 vs. 29.4). However, no significant difference between north and south Georgia was found in the death rates due to cancer, respiratory disease, and motor vehicle accident deaths, or in the infant death rate.

In correlation analyses between mortality and demographic characteristics, the relationships were much like those described previously in the urban/rural section (Table 3). For infant mortality, there were three surprises (all three in south Georgia): (1) a positive correlation was found with the percent of white high school graduates; (2) a negative correlation with the percent of whites under the 200% poverty level; and (3) a positive correlation with the mean number of years of school completed.

When health professionals were analyzed with mortality, few associations were found in south Georgia. Only with stroke deaths was there a significant negative correlation with total physicians and primary care physicians. In north Georgia, however, there were a number of relationships, most of them involving nurses and most of them negative. Primary care physicians were positively correlated with cancer deaths in the northern counties. Infant mortality was inversely related to primary care physicians in north Georgia and to dentists in south Georgia. With motor vehicle accident deaths, physicians and nurses were inversely related in north Georgia, while only BSNs were related inversely in south Georgia.

Conclusion

Rural Georgia is truly a "health disaster area." People are dying faster than the state average from all of the major causes of death. The mean crude death rate is 47% higher in rural counties than in metropolitan counties. Many different causes of death contribute to the higher rural death rate.

With significantly higher death rates than expected from the major causes of death, the need and demand for health care professionals in rural Georgia must be great. However, in contrast to the apparent need in rural counties, manpower studies reveal critical shortages of physicians, nurses, dentists, and many other health professionals in rural Georgia.[9]

Health promotion and disease prevention programs aimed specifically at the respective rural problems should be expanded.

High mortality statistics coupled with an older, poorer, less educated population present a devastating picture of health in rural Georgia. Shortages in practically all the health professions can only aggravate an already bad situation due to the lack of care available to the residents.

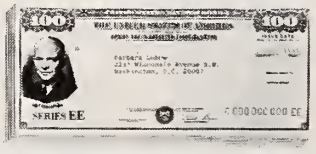
The statistics from north/south also revealed differences in health and demographic factors. In general, north Georgians were better educated, had a lower percentage of poor people, and a lower percentage of population over 65 years. This pattern is consistent with the lower death rate found in north Georgia. However, the much lower median age in south Georgia is a factor inconsistent with the higher south Georgia death rate. Health professionals are also less available in south Georgia,[9] providing proportionately less care to a sicker population.

Are there simple solutions to these problems? The answer is, obviously, no. Some action is now being taken: at least two health manpower educational programs targeted specifically to rural areas, federal and state scholarship programs, the U.S. Department of Health and Human Service's rural health initiatives, and the Georgia Department of Human Resources' primary care efforts. However, much more needs to be done, including expanded health professional educational activities and research on rural health problems. Health promotion and disease prevention programs aimed specifically at the respective rural problems should be expanded.

Rural counties tend to have an older population.

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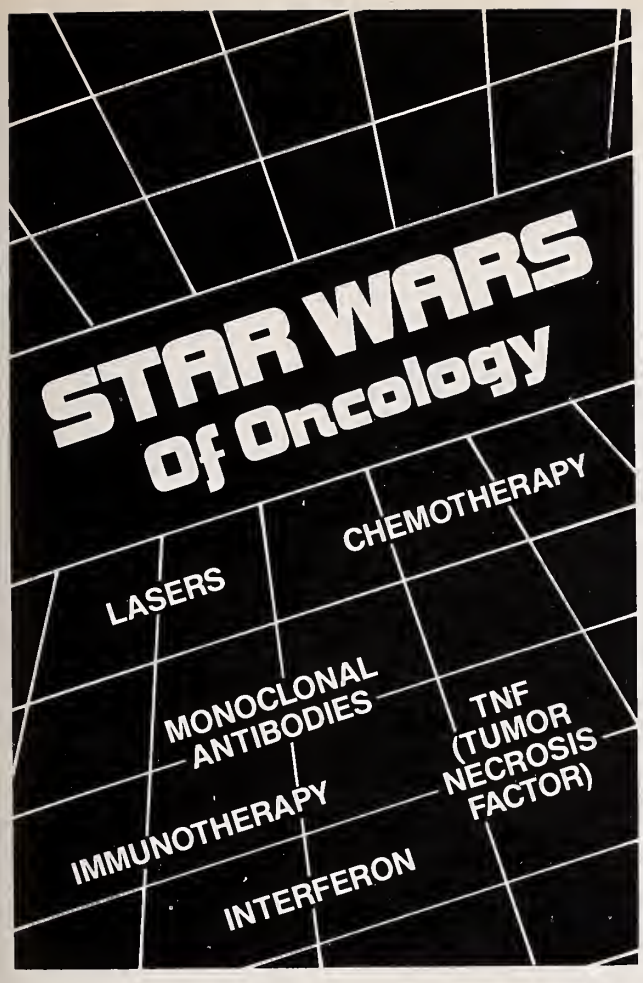
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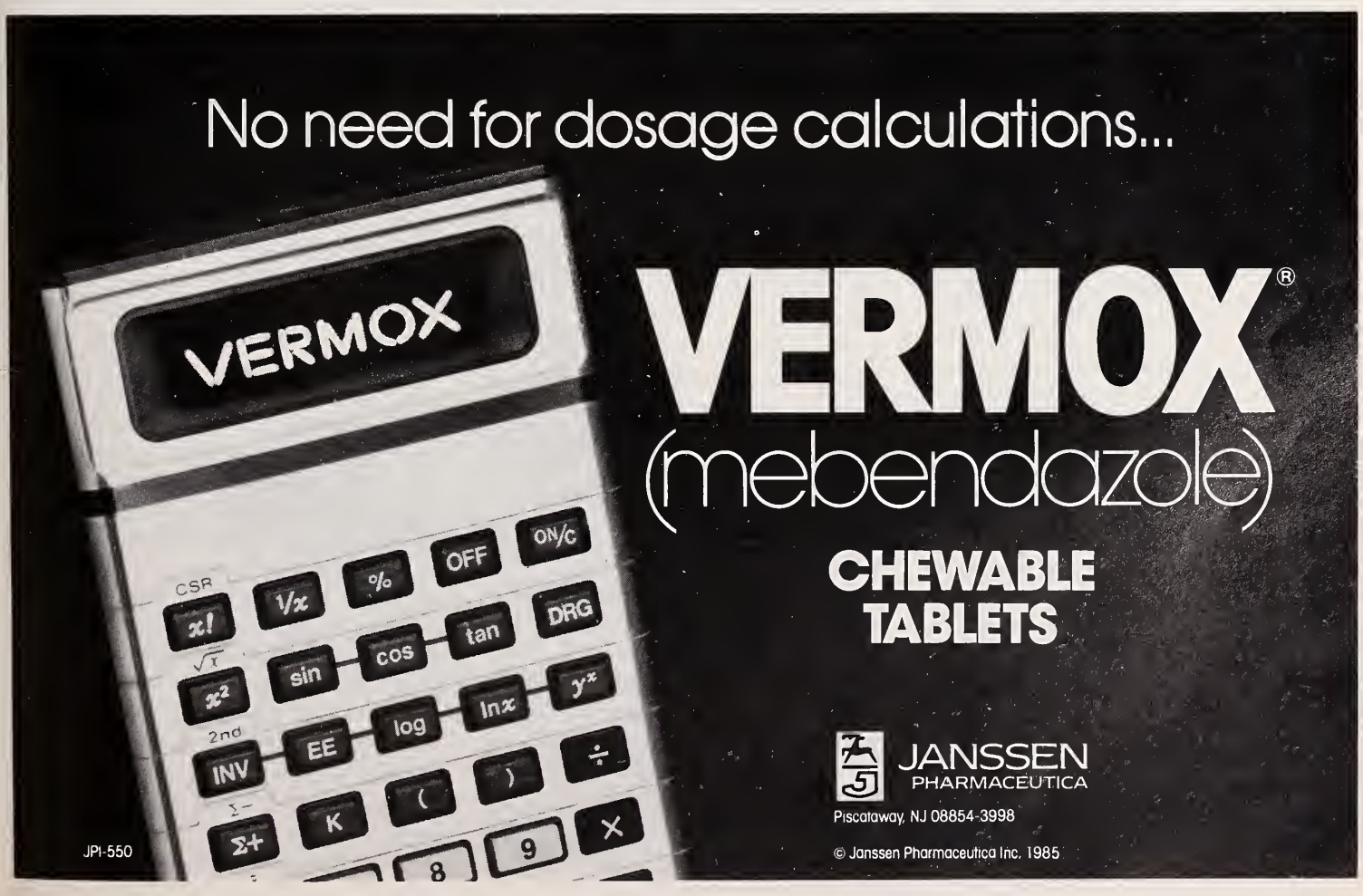
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Antenatal Rh Iso-Immunization Prophylaxis: Implications for Blood Bank Assessment

Joyce Larison, M.T., Hossam Fadel, M.D., Jerry Squires, M.D., Cleora Barnwell, M.T.

THE FACT that Rh iso-immunization does occur during pregnancy is well documented. In one series, 5 (2.4%) of 210 Rh-negative pregnant women had evidence of Rh immunization late in their pregnancy.[1] In a 7-year Canadian study of Rh immunization during pregnancy, 62 of 3533 Rh negative primigravidas or multigravidas who had no previous evidence of Rh iso-immunization developed anti-D. Ten of the 62 developed anti-D between the 28th and 34th week, 47 between the 35th week of gestation and 3 days post-delivery; only 5 patients developed anti-D prior to the 28th week of gestation.[2] Furthermore, the consequences of sensitization during pregnancy can be serious. Twenty-three of the 62 women noted above had other Rh-positive children after sensitization. Of 23 infants born, 10 required either phototherapy or exchange transfusion. Additionally, four of the 10 infants required early delivery or intrauterine transfusion.[2, 3]

Since iso-immunization was rarely documented until after the 28th week gestation, the prophylactic administration of Rh immune globulin (RhIg) was recommended at this time of gestation to Rh-negative non-sensitized women.[3] Using this protocol, Rh iso-immunization developing during pregnancy can be expected to be reduced from 1.8% to 0.1%.[3, 4] This recommendation has been recently adopted by the American College of Obstetricians and Gynecologists and is now probably generally followed.[5]

This case illustrates that at the time of delivery, if the antibody screen is positive, one must distinguish between active and passively administered anti-D.

Antenatal RhIg administration can present difficulties in interpretations by blood bank personnel when determining the candidacy for postpartum RhIg administration. A postpartum RhIg injection could be withheld mistakenly if the passively acquired anti-D is not recognized as such and active sensitization is assumed.[6] The following case report highlights this problem.

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Case Report

A 39-year-old gravida IV, Para II, woman was referred in 1979 to the Medical College of Georgia Hospital and Clinics (MCG) for genetic amniocentesis. Her antibody screen for anti-D was negative. Following a clear tap, a 300 μg dose of RhIg was given. Five months and nineteen days later, the patient delivered a Rh-positive infant at another hospital. At this time, the patient's antibody screen was positive. It was thought that she was already sensitized and therefore, the patient was not given RhIg prophylaxis. In 1982, the patient presented to MCG for obstetrical care. Her antibody screening test at this time was positive. An anti-D antibody was identified with an AHG titer of 1:16. In November of 1982, she delivered an A $Rh_o(D)+$ baby with a 1+ Direct Antiglobulin Test. Anti-D antibody was eluted from the infant's cells.

Discussion

This patient had been iso-immunized and had a baby affected by hemolytic disease of the newborn (HDN). Fortunately, the HDN was

mild in this case, but a more severe HDN could occur in future Rh-positive pregnancies. The iso-immunization could have happened at the time of amniocentesis, but this is improbable (because of the properly administered RhIg). Most probably, iso-immunization occurred because of failure to administer RhIg postpartum.

Antenatal RhIg administration can present difficulties in interpretations by blood bank personnel when determining the candidacy for postpartum RhIg administration.

This case illustrates that at the time of delivery, if the antibody screen is positive, one must distinguish between active and passively administered anti-D. If it is determined that this is an active antibody, then the patient should not receive RhIG. However, if it is known that the patient has received RhIG antenatally, then one should consider the antibody to be passively acquired. Following an injection of 300 μg of RhIgG, one could expect a RhIgG titer of about 1:1 or 1:2. One could expect 20-30 μg of anti-D to be still in the maternal circulation approximately 12 weeks after a 300 μg dose of RhIg based on the half life of IgG of 25 days.[7] However, it has been shown in the Canadian study that after antenatal administration of RhIG, 12 women continued to have weak passive anti-D titer for 6-9 months postpartum. Hence, the length of time since the antenatal administration of RhIg should not be a factor in ruling out the possibility of the postnatally discovered antibody being passive, as happened in this patient. This passive RhIg anti-D antibody does cross the placenta, and the cord blood may have a weak DAT (1^+) if the fetus is Rh positive. This does not necessarily signify HDN, and this should not contraindicate RhIg administration. If the postnatal antibody screen is positive and the cause is determined to be from RhIg anti-D passive antibody, then a standard dose of RhIG should be given if the infant is Rh positive.

In case of doubt, blood bank personnel may determine that if the titer is < 1:4, it is passive, and RhIg should be administered.[8] The physician, when ordering postnatal blood bank workups, should indicate on the request form any prenatal RhIg therapy. If the patient received any part of her prenatal care at another institution, it becomes especially important to try to obtain a good history about RhIg antenatal therapy.

Failure to administer RhIg postpartum when indicated will result in unnecessary and avoidable Rh iso-immunization.

In summary, this case is reported to alert physicians providing obstetric care and blood bank personnel about the problems that may arise from the failure to recognize the implications of antenatal RhIg administration on postpartum RhIg work ups. Failure to administer RhIg postpartum when indicated will result in unnecessary and avoidable Rh iso-immunization.[9, 10]

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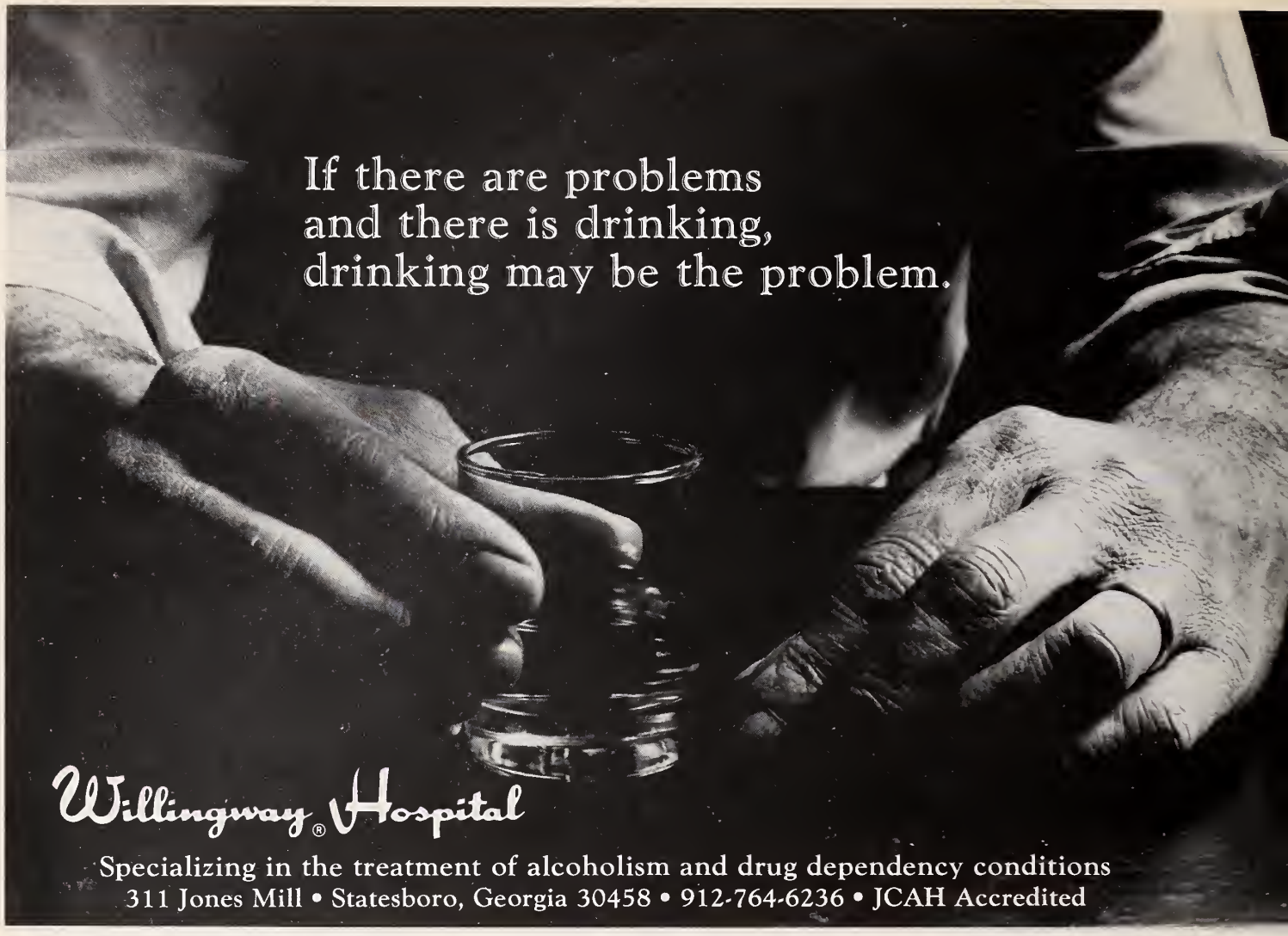
Appendix

According to the American Association of Blood Bank Standard Protocol for administration of RhIg after delivery by a Rh-negative mother of a Rh-positive child, the following standards must be adhered to:[11]

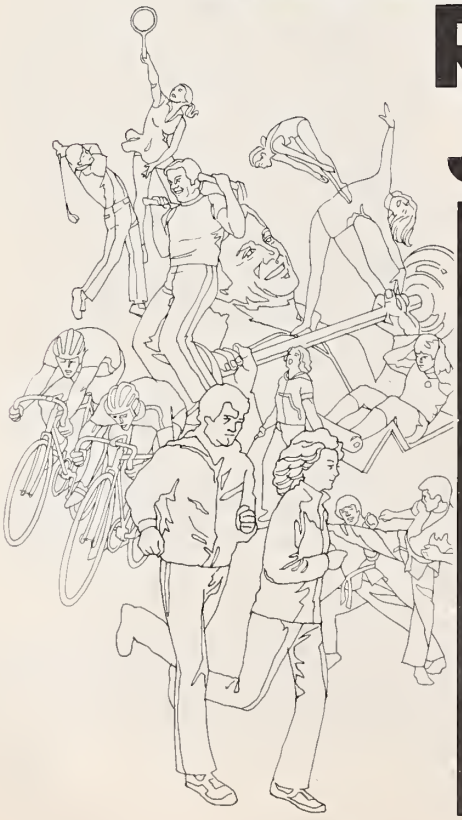
1. Determine the Rh type of the patient.
2. Rule out fetal-maternal hemorrhage (FMH), R/O false D^u positive result.
3. Screen sample for anti-D if the woman is D-negative. Establish if the woman has anti-D:
   a. Is she iso-immunized?
   b. Did she receive RhIG antepartum?
4. For women who have been given antepartum RhIg, retest postpartum.
5. Test postpartum maternal blood to establish FMH that would require more than a single dose of RhIg.

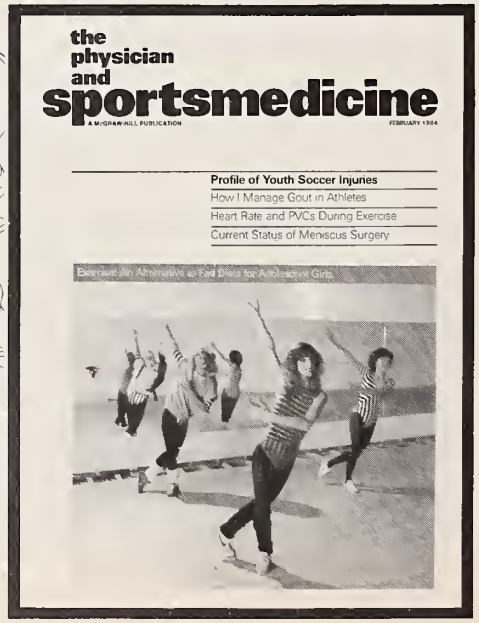
Protocol for Abortion

1. Determine Rh type
2. If D negative give RhIg, 50 μg less than 12 weeks, 300 μg greater than 12 weeks. ■



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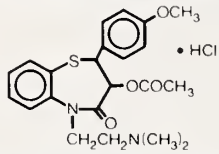
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DESCRIPTION

CARDIZEM® (diltiazem hydrochloride) is a calcium ion influx inhibitor (slow channel blocker or calcium antagonist). Chemically, diltiazem hydrochloride is 1,5-Benzothiazepin-4(5H)one,3-(acetyloxy) -5-[2-(dimethylamino)ethyl]-2,3-dihydro-2-(4-methoxyphenyl)-, monohydrochloride,(+) -cis-. The chemical structure is:



Diltiazem hydrochloride is a white to off-white crystalline powder with a bitter taste. It is soluble in water, methanol, and chloroform. It has a molecular weight of 450.98. Each tablet of CARDIZEM contains either 30 mg or 60 mg diltiazem hydrochloride for oral administration.

CLINICAL PHARMACOLOGY

The therapeutic benefits achieved with CARDIZEM are believed to be related to its ability to inhibit the influx of calcium ions during membrane depolarization of cardiac and vascular smooth muscle.

Mechanisms of Action. Although precise mechanisms of its antianginal actions are still being delineated, CARDIZEM is believed to act in the following ways:

1. Angina Due to Coronary Artery Spasm: CARDIZEM has been shown to be a potent dilator of coronary arteries both epicardial and subendocardial. Spontaneous and ergonovine-induced coronary artery spasm are inhibited by CARDIZEM.
2. Exertional Angina: CARDIZEM has been shown to produce increases in exercise tolerance, probably due to its ability to reduce myocardial oxygen demand. This is accomplished via reductions in heart rate and systemic blood pressure at submaximal and maximal exercise work loads.

In animal models, diltiazem interferes with the slow inward (depolarizing) current in excitable tissue. It causes excitation-contraction uncoupling in various myocardial tissues without changes in the configuration of the action potential. Diltiazem produces relaxation of coronary vascular smooth muscle and dilation of both large and small coronary arteries at drug levels which cause little or no negative inotropic effect. The resultant increases in coronary blood flow (epicardial and subendocardial) occur in ischemic and nonischemic models and are accompanied by dose-dependent decreases in systemic blood pressure and decreases in peripheral resistance.

Hemodynamic and Electrophysiologic Effects. Like other calcium antagonists, diltiazem decreases sinoatrial and atrioventricular conduction in isolated tissues and has a negative inotropic effect in isolated preparations. In the intact animal, prolongation of the AH interval can be seen at higher doses.

In man, diltiazem prevents spontaneous and ergonovine-provoked coronary artery spasm. It causes a decrease in peripheral vascular resistance and a modest fall in blood pressure and, in exercise tolerance studies in patients with ischemic heart disease, reduces the heart rate-blood pressure product for any given work load. Studies to date, primarily in patients with good ventricular function, have not revealed evidence of a negative inotropic effect; cardiac output, ejection fraction, and left ventricular end diastolic pressure have not been affected. There are as yet few data on the interaction of diltiazem and beta-blockers. Resting heart rate is usually unchanged or slightly reduced by diltiazem.

Intravenous diltiazem in doses of 20 mg prolongs AH conduction time and AV node functional and effective refractory periods approximately 20%. In a study involving single oral doses of 300 mg of CARDIZEM in six normal volunteers, the average maximum PR prolongation was 14% with no instances of greater than first-degree AV block. Diltiazem-associated prolongation of the AH interval is not more pronounced in patients with first-degree heart block. In patients with sick sinus syndrome, diltiazem significantly prolongs sinus cycle length (up to 50% in some cases).

Chronic oral administration of CARDIZEM in doses of up to 240 mg/day has resulted in small increases in PR interval, but has not usually produced abnormal prolongation. There were, however, three instances of second-degree AV block and one instance of third-degree AV block in a group of 959 chronically treated patients.

Pharmacokinetics and Metabolism. Diltiazem is absorbed from the tablet formulation to about 80% of a reference capsule and is subject to an extensive first-pass effect, giving an absolute bioavailability (compared to intravenous dosing) of about 40%. CARDIZEM undergoes extensive hepatic metabolism in which 2% to 4% of the unchanged drug appears in the urine. In vitro binding studies show CARDIZEM is 70% to 80% bound to plasma proteins. Competitive ligand binding studies have also shown CARDIZEM binding is not altered by therapeutic concentrations of digoxin, hydrochlorothiazide, phenylbutazone, propranolol, salicylic acid, or warfarin. Single oral doses of 30 to 120 mg of CARDIZEM result in detectable plasma levels within 30 to 60 minutes and peak plasma levels two to three hours after drug administration. The plasma elimination half-life following single or multiple drug administration is approximately 3.5 hours. Desacetyl diltiazem is also present in the plasma at levels of 10% to 20% of the parent drug and is 25% to 50% as potent a coronary vasodilator as diltiazem. Therapeutic blood levels of CARDIZEM appear to be in the range of 50 to 200 ng/ml. There is a departure from dose-linearity when single doses above 60 mg are given; a 120-mg dose gave blood levels three times that of the 60-mg dose. There is no information about the effect of renal or hepatic impairment on excretion or metabolism of diltiazem.

INDICATIONS AND USAGE

1. **Angina Pectoris Due to Coronary Artery Spasm.** CARDIZEM is indicated in the treatment of angina pectoris due to coronary artery spasm. CARDIZEM has been shown effective in the treatment of spontaneous coronary artery spasm presenting as Prinzmetal's variant angina (resting angina with ST-segment elevation occurring during attacks).
2. **Chronic Stable Angina (Classic Effort-Associated Angina).** CARDIZEM is indicated in the management of chronic stable angina. CARDIZEM has been effective in controlled trials in reducing angina frequency and increasing exercise tolerance.

There are no controlled studies of the effectiveness of the concomitant use of diltiazem and beta-blockers or of the safety of this combination in patients with impaired ventricular function or conduction abnormalities.

CONTRAINDICATIONS

CARDIZEM is contraindicated in (1) patients with sick sinus syndrome except in the presence of a functioning ventricular pacemaker, (2) patients with second- or third-degree AV block except in the presence of a functioning ventricular pacemaker, and (3) patients with hypotension (less than 90 mm Hg systolic).

WARNINGS

1. **Cardiac Conduction.** CARDIZEM prolongs AV node refractory periods without significantly prolonging sinus node recovery time, except in patients with sick sinus syndrome. This effect may rarely result in abnormally slow heart rates (particularly in patients with sick sinus syndrome) or second- or third-degree AV block (six of 1243 patients for 0.48%). Concomitant use of diltiazem with beta-blockers or digitalis may result in additive effects on cardiac conduction. A patient with Prinzmetal's angina developed periods of asystole (2 to 5 seconds) after a single dose of 60 mg of diltiazem.
2. **Congestive Heart Failure.** Although diltiazem has a negative inotropic effect in isolated animal tissue preparations, hemodynamic studies in humans with normal ventricular function have not shown a reduction in cardiac index nor consistent negative effects on contractility (dp/dt). Experience with the use of CARDIZEM alone or in combination with beta-blockers in patients with impaired ventricular function is very limited. Caution should be exercised when using the drug in such patients.
3. **Hypotension.** Decreases in blood pressure associated with CARDIZEM therapy may occasionally result in symptomatic hypotension.
4. **Acute Hepatic Injury.** In rare instances, patients receiving CARDIZEM have exhibited reversible acute hepatic injury as evidenced by moderate to extreme elevations of liver enzymes. (See PRECAUTIONS and ADVERSE REACTIONS.)

PRECAUTIONS

General. CARDIZEM (diltiazem hydrochloride) is extensively metabolized by the liver and excreted by the kidneys and in bile. As with any new drug given over prolonged periods, laboratory parameters should be monitored at regular intervals. The drug should be used with caution in patients with impaired renal or hepatic function. In subacute and chronic dog and rat studies designed to produce toxicity, high doses of diltiazem were associated with hepatic damage. In special subacute hepatic studies, oral doses of 125 mg/kg and higher in rats were associated with histological changes in the liver which were reversible when the drug was discontinued. In dogs, doses of 20 mg/kg were also associated with hepatic changes; however, these changes were reversible with continued dosing.

Drug Interaction. Pharmacologic studies indicate that there may be additive effects in prolonging AV conduction when using beta-blockers or digitalis concomitantly with CARDIZEM. (See WARNINGS).

Controlled and uncontrolled domestic studies suggest that concomitant use of CARDIZEM and beta-blockers or digitalis is usually well tolerated. Available data are not sufficient, however, to predict the effects of concomitant treatment, particularly in patients with left ventricular dysfunction or cardiac conduction abnormalities. In healthy volunteers, diltiazem has been shown to increase serum digoxin levels up to 20%.

Carcinogenesis, Mutagenesis, Impairment of Fertility. A 24-month study in rats and a 21-month study in mice showed no evidence of carcinogenicity. There was also no mutagenic response in in vitro bacterial tests. No intrinsic effect on fertility was observed in rats.

Pregnancy. Category C. Reproduction studies have been conducted in mice, rats, and rabbits. Administration of doses ranging from five to ten times greater (on a mg/kg basis) than the daily recommended therapeutic dose has resulted in embryo and fetal lethality. These doses, in some studies, have been reported to cause skeletal abnormalities. In the perinatal/postnatal studies, there was some reduction in early individual pup weights and survival rates. There was an increased incidence of stillbirths at doses of 20 times the human dose or greater.

There are no well-controlled studies in pregnant women; therefore, use CARDIZEM in pregnant women only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers. It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, exercise caution when CARDIZEM is administered to a nursing woman if the drug's benefits are thought to outweigh its potential risks in this situation.

Pediatric Use. Safety and effectiveness in children have not been established.

ADVERSE REACTIONS

Serious adverse reactions have been rare in studies carried out to date, but it should be recognized that patients with impaired ventricular function and cardiac conduction abnormalities have usually been excluded.

In domestic placebo-controlled trials, the incidence of adverse reactions reported during CARDIZEM therapy was not greater than that reported during placebo therapy.

The following represent occurrences observed in clinical studies which can be at least reasonably associated with the pharmacology of calcium influx inhibition. In many cases, the relationship to CARDIZEM has not been established. The most common occurrences, as well as their frequency of presentation, are: edema (2.4%), headache (2.1%), nausea (1.9%), dizziness (1.5%), rash (1.3%), asthenia (1.2%), AV block (1.1%). In addition, the following events were reported infrequently (less than 1%) with the order of presentation corresponding to the relative frequency of occurrence.

Cardiovascular:	Flushing, arrhythmia, hypotension, bradycardia, palpitations, congestive heart failure, syncope.
Nervous System:	Paresthesia, nervousness, somnolence, tremor, insomnia, hallucinations, and amnesia.
Gastrointestinal:	Constipation, dyspepsia, diarrhea, vomiting, mild elevations of alkaline phosphatase, SGOT, SGPT, and LDH.
Dermatologic:	Pruritus, petechiae, urticaria, photosensitivity.
Other:	Polyuria, nocturia.

The following additional experiences have been noted:

A patient with Prinzmetal's angina experiencing episodes of vasospastic angina developed periods of transient asymptomatic asystole approximately five hours after receiving a single 60-mg dose of CARDIZEM.

The following postmarketing events have been reported infrequently in patients receiving CARDIZEM: erythema multiforme; leukopenia; and extreme elevations of alkaline phosphatase, SGOT, SGPT, LDH, and CPK. However, a definitive cause and effect between these events and CARDIZEM therapy is yet to be established.

OVERDOSAGE OR EXAGGERATED RESPONSE

Overdosage experience with oral diltiazem has been limited. Single oral doses of 300 mg of CARDIZEM have been well tolerated by healthy volunteers. In the event of overdosage or exaggerated response, appropriate supportive measures should be employed in addition to gastric lavage. The following measures may be considered:

Bradycardia	Administer atropine (0.60 to 1.0 mg). If there is no response to vagal blockade, administer isoproterenol cautiously.
High-Degree AV Block	Treat as for bradycardia above. Fixed high-degree AV block should be treated with cardiac pacing.
Cardiac Failure	Administer inotropic agents (isoproterenol, dopamine, or dobutamine) and diuretics.
Hypotension	Vasopressors (eg, dopamine or levarterenol bitartrate).

Actual treatment and dosage should depend on the severity of the clinical situation and the judgment and experience of the treating physician.

The oral/LD_{50}'s in mice and rats range from 415 to 740 mg/kg and from 560 to 810 mg/kg, respectively. The intravenous LD_{50}'s in these species were 60 and 38 mg/kg, respectively. The oral LD_{50} in dogs is considered to be in excess of 50 mg/kg, while lethality was seen in monkeys at 360 mg/kg. The toxic dose in man is not known, but blood levels in excess of 800 ng/ml have not been associated with toxicity.

DOSAGE AND ADMINISTRATION

Exertional Angina Pectoris Due to Atherosclerotic Coronary Artery Disease or Angina Pectoris at Rest Due to Coronary Artery Spasm. Dosage must be adjusted to each patient's needs. Starting with 30 mg four times daily, before meals and at bedtime, dosage should be increased gradually (given in divided doses three or four times daily) at one- to two-day intervals until optimum response is obtained. Although individual patients may respond to any dosage level, the average optimum dosage range appears to be 180 to 240 mg/day. There are no available data concerning dosage requirements in patients with impaired renal or hepatic function. If the drug must be used in such patients, titration should be carried out with particular caution.

Concomitant Use With Other Antianginal Agents:

1. **Sublingual NTG** may be taken as required to abort acute anginal attacks during CARDIZEM therapy.
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Addendum to Georgia's Surgical Leaders . . . We Are Really Number 2

Joseph M. Van De Water, M.D.

As correctly noted in a Letter to the Editor in the March, 1985, issue of *Journal of the MAG* by David W. Retterbush, M.D., a surgeon from Valdosta, and probably observed by a good number of other proud Georgians, Dr. Lewis Flint was left out of my article, "Georgia's Surgical Leaders," in the January, 1985, issue of the *Journal,* pp. 15-18. Our state is really in second place as the original home of Chiefs of Surgery in our nation's leading medical schools. We are in a tie with Pennsylvania, with eight chiefs, but still behind New York, with her 12 Chiefs. Dr. Alfred Blalock would be very proud of his fellow Georgians, especially their quality. Our eight came out of a total state population of only 5 million, as compared to Pennsylvania's 12 million and New York's 18 million residents.

At the age of 44, Dr. Flint became the second youngest Georgian to lead a major Department of Surgery.

The latest member of this illustrious group of Georgia surgical leaders discussed in my article in the January *Journal,* is Lewis Matthew Flint, Jr., M.D. He was born at Emory Hospital in DeKalb County in 1940, went to George Longino elementary school in College Park and Darlington high school in Rome. He then went to Duke University in North Carolina, receiving his A.B. in 1961 and his M.D. in 1965. His training continued at Duke as a surgical intern and resident until it was interrupted in 1967 for service as a Major in the U.S. Army Medical Corps. Dr. Flint returned 2 years later to the Medical University of South Carolina, where he finished as Chief Resident in 1974. However, 2 of these last 5 years were spent as a Fellow in Trauma Surgery at Parkland Hospital in Dallas under Dr. Tom Shires. With that outstanding background in trauma surgery, Dr. Flint went to the University of Louisville, where under the able tutelage of Dr. Hiram Polk, he rapidly gained national recognition as an academic leader, especially in Trauma Surgery, becoming Professor of Surgery in 1972. Ten years later, on November 1, 1984, he accepted the position of Professor and Chairman of Surgery at the State University of New York in Buffalo. Thus, Dr. Flint, at age 44, became the second youngest Georgian to lead a major Department of Surgery; Dr. Blalock, at age 42, assumed the Chair of Surgery at Johns Hopkins in 1941. ■



Lewis M. Flint, Jr., M.D.

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Contemporary Wound Management with Natural and Synthetic Dressings

S. Randolph May, Ph.D., Joseph M. Still, Jr., M.D.

The authors compare the specific properties of modern wound dressings with the requirements of the biology of wound healing; they then outline a method for choosing the appropriate dressing for a particular wound.

THE DRESSING OF WOUNDS has traditionally been of great interest to those who provide medical care (Figure 1), and the debate over optimum wound dressing materials and techniques dates at least to the Ebers and Edwin Smith papyri written about 1500 B.C.[1, 2] The traditional interest in wound care has intensified with recent advances in the knowledge of hemostasis, inflammation, and reepithelialization, and with the development and introduction of many new types of wound dressings. In this paper, we provide clinicians with a brief summary of the degree to which modern gauze, biologic, and synthetic dressings meet the requirements of the healing wound; and we present an algorithm, or flow diagram, useful for choosing the dressing most appropriate for a particular wound.

Desirable Characteristics of Wound Dressings

From the point of view of the patient, the most desirable characteristics of a wound dressing are that it control pain, be convenient to apply and remove, and shield the unattractive wound surface from visibility during the healing process. While these limited outcomes are certainly important, the optimal wound dressing characteristics from the medical perspective encompass a much larger range of items (Table 1).[3] It is true that most wounds, including those that are partial-thickness and even some small full-thickness ones such as surgical incisions, can heal unaided by dressings in about 3 weeks. In light of this fact, wound dressings should be chosen based on their provision of certain advantages over undressed wounds. They should do no harm to the wound (Table 1, items 1-7), provide passive physical protection for the wound (Table 1, items 8-11), actively manipulate the wound both physically and chemically to aid healing (Table 1, items 12-18), and be cost effective (Table 1, item 19). Dressings having some or all of the characteristics listed in Table 1 may be able to compensate either for liabilities inherent in a particular type of wound or for inadequate responses on the part of the patient's wound healing or wound protection mechanisms. Such inadequate responses are particularly prevalent and troublesome in patients sustaining major thermal injuries or trauma, or in surgical patients with compromised status due to old age, excessive obesity, diabetes, steroid therapy, severe malnutrition, or preexistent sepsis or septicemia.

Gauze Dressings

The difficulties with gauze dressings are that they (1) shed particles and fibers into the wound, risking a foreign body reaction; (2) become enmeshed in the dried serous exudate from the wound, causing both pain to the patient and the risk of premature removal of portions of newly regenerated epidermis when the dressing requires changing; and (3) provide slow wound healing relative to alternative

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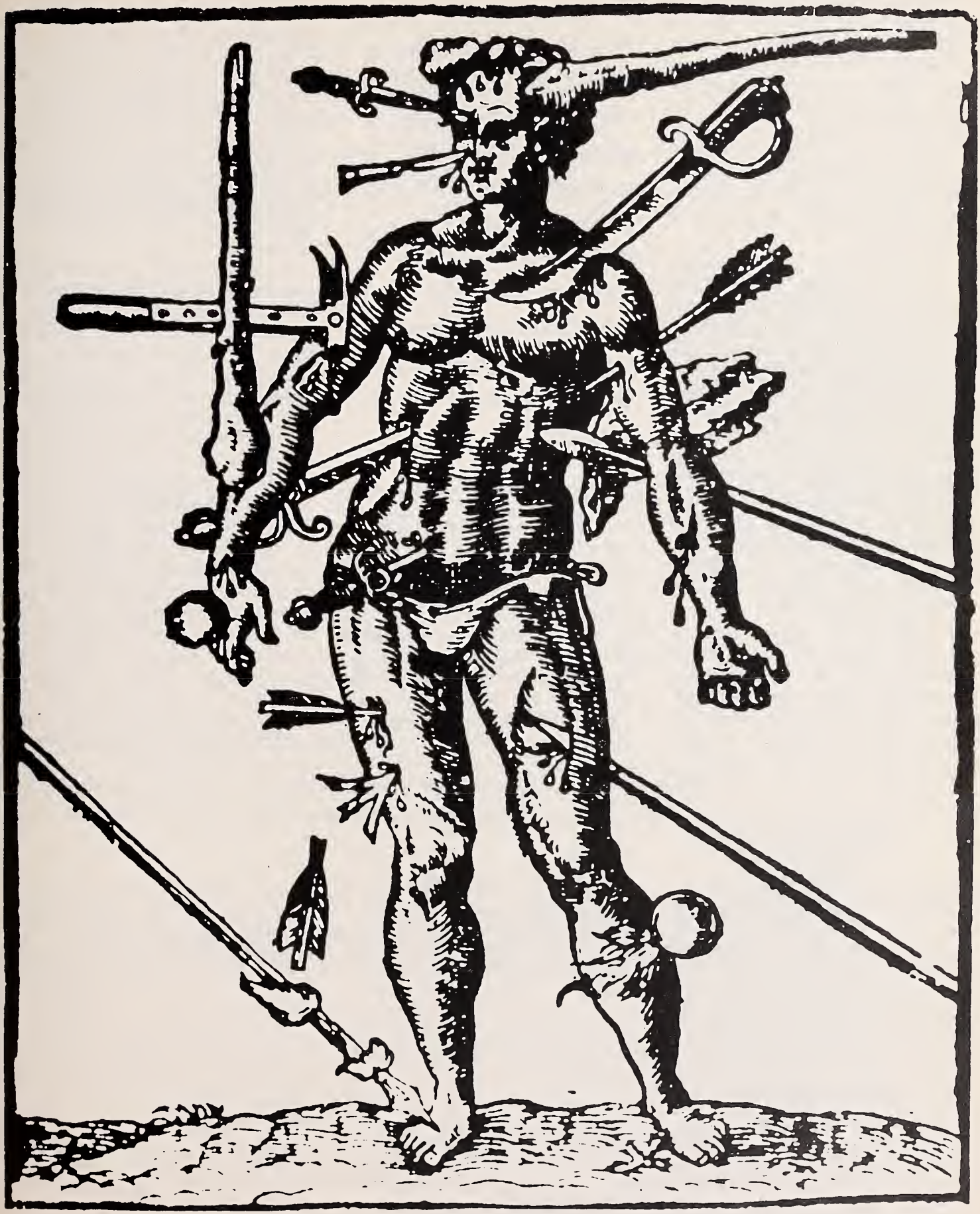


Figure 1 — "The Wounded Man" is a medieval woodcut of uncertain origin which was published in Ambroise Paré's 16th century Treatise and Apologies. *The illustration depicts the types of battle injuries common to the medieval soldier. The woodcut almost certainly precedes the siege of the Battle of Metz, which is dated at 1530.*

modern dressings.[4, 5] An attempted solution to these practical problems has been to impregnate the gauze with petroleum jelly or paraffin. This reduces somewhat the aforementioned difficulties, but does so at the expense of absorption of wound exudate, and the healing rate of the wound is still prolonged. The reduction in absorbency is a liability, since many wounds produce copious exudate, a problem that may reach a level of 0.35 ml/cm^2/day in the open wounds of burn patients.[6]

A second aspect of gauze dressings involves commercial impregnation with toxic antimicrobial agents (e.g., Scarlet Red™, Cheseborough-Ponds, Inc., Greenwich, CT). These antibiotic-impregnated dressings are used prophylactically against possible bacterial colonization and wound infection. However, the antibiotic agents in such dressings often may chemically inhibit wound healing processes by their cytotoxic effects. A relatively noncytotoxic choice of topical agent for gauze dressings is 0.1% gentamycin sulfate ointment (Garamycin™ Ointment, Schering Corp., Kenilworth, NJ).

A third aspect of gauze dressings involves their use as temporary wound soaks. This is perhaps the best utilization of plant fiber dressings, since it allows frequent wound inspection during dressing changes.

The often cited benefits of human cadaveric allograft skin closure of the wound include the reduction in the loss of heat, water, electrolytes, and protein, and the provision of a barrier against microbiologic colonization of the wound.

Wound soaks can be used to deliver a relatively noncytotoxic antibacterial agent such as 0.5% $AgNO_3$,[7] or 0.25% Dakin's solution (dilute sodium hypochlorite),[8, 9] and the rapid changing of the soak dressings prevents the main liability of gauze dressings, incorporation into the wound. In our experience, Dakin's solution is the most useful agent for wound soaks.

Biologic Dressings

Biologic dressings as a class are currently represented by three materials: human cadaveric allograft skin, sometimes termed "homograft" (available from 33 skin banks in the United States); porcine xenograft skin, sometimes termed "heterograft" (commercially available from a single supplier, Genetic Laboratories, Inc., St. Paul, MN); and human amniotic membranes (available from obstetrical services, but requiring cleansing).

The use of cadaveric allograft skin arose as a method of temporarily covering wounds with a viable skin transplant after excision of nonvital tissue.[10-12] The often cited benefits of this allograft closure of the wound include the reduction in the loss of heat, water, electrolytes, and protein, and the provision of a barrier against microbiologic colonization of the wound.[10-12] Cadaver skin has been found to be the dressing of choice for grafting excised full-thickness thermal injuries and has also been effectively employed in the temporary coverage of partial-thickness burn wounds and decubitus ulcers. Besides the viability of the material, the other characteristic required of cadaveric allograft skin is microbiologic cleanliness.[12, 13] Strips of allograft skin are held in place in a fashion similar to autograft with surgical net,

Table 1 — Desirable Characteristics of a Wound Dressing

Doing no harm to the wound

1. Nonantigenicity
2. Nontoxicity
3. Noncarcinogenicity
4. No materials which shed into wound, interfering with healing
5. Nonadherence to partial-thickness wound surfaces and surgical incisions, facilitating removal of dressing
6. Adherence to full-thickness wound surfaces, preventing fluid pockets and void spaces, which predispose to infection
7. Elasticity and durability for patient mobility and physical therapy

Passive physical protection of the wound

8. Stability on wound
9. Prevent wound desiccation
10. Mechanical protection of wound from physical contact with environment
11. Occlusiveness to environmental microorganisms

Active manipulation of the wound

12. Hemostatic
13. Absorption or adjusted permeability to control wound exudate
14. Maintenance of normal body temperature at wound surface
15. Alleviation or control of pain
16. Promotion of rapid wound healing
17. Intrinsic promotion of infection-free wound healing
18. Antiseptic action or compatibility with topical antimicrobial agents

Cost effectiveness

19. Low combined costs of dressing, application, and monitoring

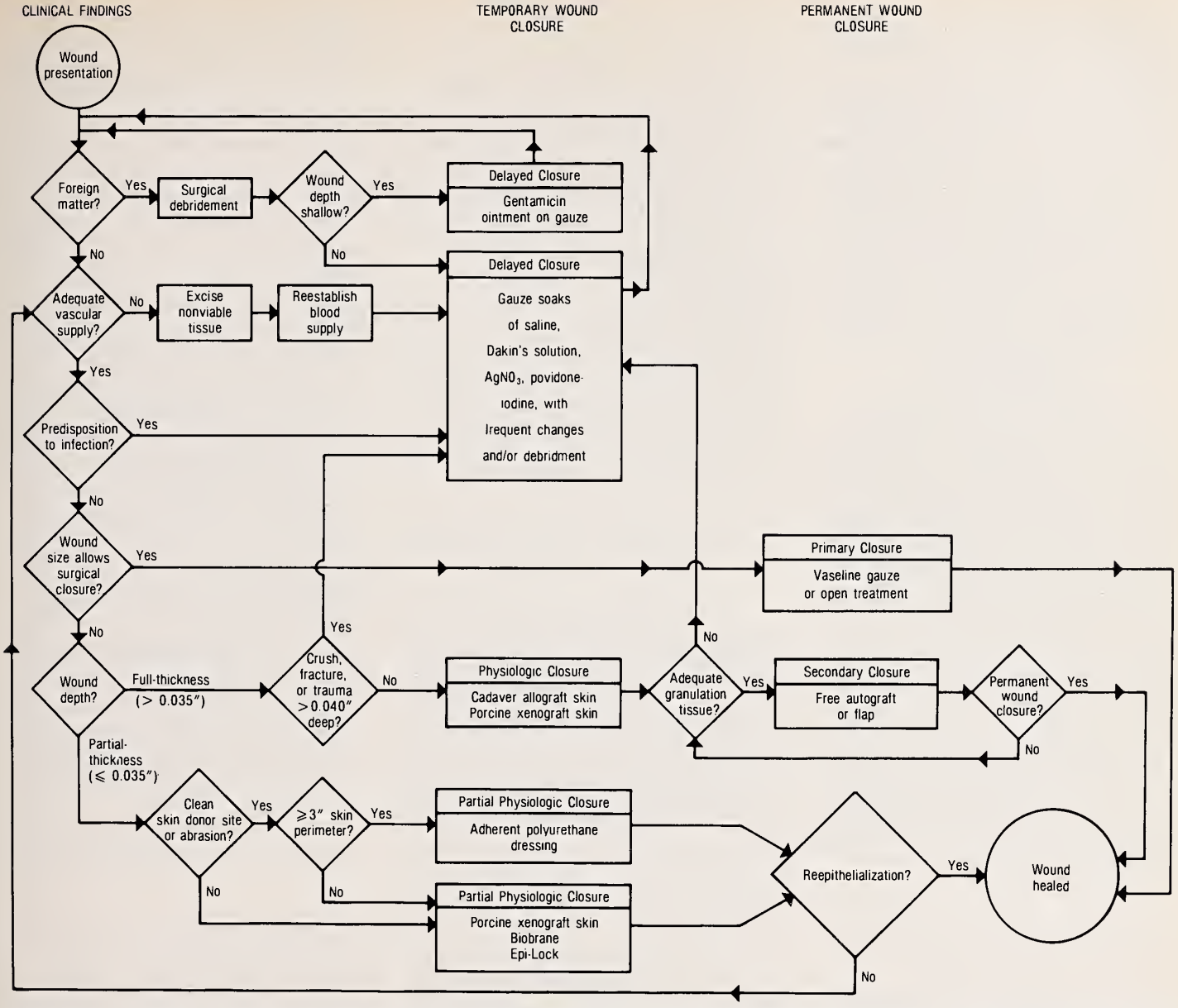


Figure 2 — Flow diagram for the surgical management of a wound indicating the authors' choices for appropriate dressing utilization.

large-mesh gauze, or adhesive strips until a "take" has been obtained.[12] The allografts generally remain in place for 1 to 2 weeks, until they are removed to allow autografting of the wound.

Since only about 14-19% of the need for cadaveric allograft skin is met in the United States on an annual basis,[12] frozen porcine xenograft has been used as a substitute biologic dressing on partial-thickness and full-thickness wounds.[11, 14] Investigation has shown that adherence of the xenograft to the wound is responsible for the antibacterial effect obtained with the dressing.[15] Most investigators have found that porcine xenograft does not elicit significant cellular inflammatory response, humoral antibody production, or sensitization in the graft recipient.[16] The four major advantages of porcine xenograft are that more rapid wound healing is obtained than with topical antibacterial dressings, such as silver sulfadiazine cream[17]; that it reduces pain; that it reduces infection; and that there is easy availability of this biologic dressing. The two major liabilities associated with the use of porcine xenograft skin are its occasional incorporation into the wound bed with subsequent delay in healing,[18] and the risk that infection associated with the skin might be transmitted to the wounds of the recipient patient.[13] The recent development of a $AgNO_3$-impregnated porcine xenograft appears to have provided a combination which effectively prevents patient contamination from the xenograft itself. Recent evidence gathered by our Institute has indicated that the absorption of silver by wounds covered with $AgNO_3$-impregnated porcine xenograft is not equal to that of silver sulfadiazine cream applied twice daily; however, the moist wound healing encouraged by the xenograft coverage yields healing rates on superficial partial-thickness burn wounds of 6.8 ± 2.4 days, compared to 14.2 ± 4.8 days for the topical cream on contralateral wounds of the same apparent depth.[17]

Amniotic membranes have been

recommended for the temporary coverage of debrided wounds,[19] primarily due to their easy and low-cost acquisition from the large number of obstetrical cases in large metropolitan hospitals. However, we have found that these membranes are not as useful in wound coverage as actual skin, since their thinness provides an inadequate barrier to fluid loss and to microbial penetration. Amniotic membranes are a fragile wound dressing requiring a good deal of monitoring and replacement.

Synthetic Dressings

Synthetic dressings for short-term use may be employed to cover partial-thickness burns, avulsions, and autograft skin donor sites. The definition of short-term use is a few days, the amount of time required to reepithelialize a partial-thickness injury. The perfect temporary synthetic dressing material has not yet been developed; however, a recent analysis has indicated that important steps have been taken to provide some of the desired qualities listed in Table 1.[20] This review will be confined to analyses of what we consider to be the most promising commercially available synthetic dressings.

The primary advantages of Biobrane™, a synthetic dressing, are its high oxygen and water vapor permeability and its strong adherence to the wound.

Adherent elastomeric polyurethane film wound dressings (Op-Site™, Smith & Nephew, Columbia, SC; Tegaderm™, 3M, St. Paul, MN; Bioclusive™, Johnson & Johnson, New Brunswick, NJ; *inter aliae*) have

Adherent elastomeric polyurethane film wound dressings (such as Op-Site™, Tegaderm™, and Bioclusive™) have proven to be extremely useful in the coverage of autograft skin donor sites.

proven to be extremely useful in the coverage of autograft skin donor sites. The moist conditions under these dressings prevent harmful desiccation of the cells in the wound,[5] external oxygen may penetrate the film to the wound surface to maintain an aerobic environment there,[3, 5, 21] and the trapped wound exudate fluid provides nutrients and maintains relatively normal biochemistry for reepithelialization.[3, 21] This environment provides shortened wound healing times in partial-thickness wounds (6.8 ± 0.8 days in autograft skin donor sites), and can relieve the significant pain associated with partial-thickness injuries.[3, 21] Elevated levels of white blood cells are attracted to the occluded wound surface, providing adequate protection against microorganisms trapped under the mechanical barrier of the film.[3, 21, 22] There is also evidence that the adhesive of one of these dressings (Op-Site™) is bacteriocidal[3, 23] and activates complement C3, facilitating opsonization and phagocytosis by the polymorphonuclear neutrophils.[23] The combination of bacteriocidal adhesive and active polymorphonuclear neutrophils results in published infection rates of 0-10% (average = 4%) on wounds covered by the Op-Site™ dressing.[3, 21] The disadvantages of adhesive polyurethane dressings are (1) the requirement for a border of intact, uninjured skin around the wound for adhesion of the dressing; (2) the accumulation of a significant amount of wound exudate which must be drained manually using a syringe or else leakage will occur; and (3) restrictions on the location and area of dressing placement. Adherent polyurethane wound dressings are relatively low in cost

A second type of wound dressing for short-term healing of partial-thickness wounds is Biobrane™.[24] Biobrane™ is a 360 μm-thick triple-filament nylon fabric entrapped in a 6 μm-thick silicone membrane. The nylon loops are coated with denatured porcine skin collagen peptides to improve adherence to the wound. The silicone membrane forms a protective cover, allows oxygen transmission to the wound, and causes a seven-fold decrease in water loss from the open wound surface. The primary advantages of this dressing are its high oxygen and water vapor permeability and its strong adherence to the wound. The adherence is generally an advantage in wounds; however, the dressing must not be placed over contaminated wounds or wounds with copious exudate. Moreover, it may take

In their current state of development, the synthetic dressings are best applied early to clean partial-thickness wounds, such as skin donor sites, abrasions, and partial-thickness burn wounds.

2-3 days for the dressing to adhere properly to the wound surface, and during this time the dressing requires tight stenting with wraps, surgical staples, or sutures. If applied correctly, Biobrane™ is capable of reducing wound contraction, reducing patient pain, controlling water loss so that a

moist wound environment is maintained to promote rapid reepithelialization, and reducing infection by mechanical protection.[24]

Epi-Lock™, a modified polyurethane dressing, insulates the wound surface, maintaining a 37°C temperature which keeps the epithelial cell mitotic rate high for faster reepithelialization and maximizes the phagocytosis of bacteria and wound debris by polymorphonuclear leukocytes.

A third type of wound dressing suitable for short-term use is a semi-occlusive, gas and water vapor permeable dressing derived from modified polyurethane. This dressing, called Epi-Lock™ (Derma-Lock Medical Corp., Englewood, CO), retains most of the useful attributes of polyurethane film dressings. Epi-Lock™ also insulates the wound surface, maintaining a 37°C temperature which keeps the epithelial cell mitotic rate high for faster reepithelialization and maximizes the phagocytosis of bacteria and wound debris by polymorphonuclear leukocytes. Epi-Lock™ is placed over the wound using surgical tapes, surgical staples, elastic net, or fine mesh gauze wraps, and we have found it to be useful as a dressing on burns and partial-thickness wounds.

Wound Treatment Algorithm

Figure 2 presents an algorithm, or diagrammatic scheme, of the clinical decisions involved in the treatment of wounds of all types. The sequence of decisions has been chosen purposefully to insure consideration of the items in the clinically important order. Figure 1 is a systematic method of presenting our perspective on the decision process in wound care, and integrating the choice of wound dressing into that decision process.

An inspection of Figure 1 reveals several important points about the wound treatment process. First, the primary treatment of wounds involves a series of decisions concerning precise qualities of the injury, indicated on the diagram by the sequence of questions (enclosed in diamonds). Second, wound treatment is a complex process involving many different types of dressings in different situations (enclosed in rectangles). Third, wound dressings are temporizing devices used to help the body's natural homeostatic mechanisms to reverse the pathology and heal the wound. In Figure 1, it can be seen that gauze soaks with relatively noncytotoxic antimicrobial agents are the dressings of choice when the wound is compromised in any way by the presence of necrotic tissue, vascular difficulties, presence of foreign matter, or susceptibility to infection. Biologic dressings, such as cadaveric allograft and porcine xenograft, are the dressings of choice on full-thickness skin injuries. In their current state of development, the synthetic dressings are best applied early to clean partial-thickness wounds, such as skin donor sites, abrasions, and partial-thickness burn wounds..

The two major liabilities associated with the use of porcine xenograft skin are its occasional incorporation into the wound bed, with subsequent delay in healing, and the risk that infection associated with the skin might be transmitted to the wounds of the recipient patient.

Future Trends in Wound Management

It is not an exaggeration to state that a revolution in wound management is currently in progress. The traditional wound dressing materials, modified plant fibers and animal skins, will no doubt continue to be used extensively due to their familiarity to health care professionals, their ease of sterilization, and their low cost. However, synthetic dressings will also be used in ever increasing numbers because they cause less disturbance to the healing wound and because many of them have the capacity to favorably manipulate the progress of wound healing. Presently, synthetic dressings are used primarily on clean wounds where their beneficial effects on wound healing can be utilized with little risk of infection. In the future, many new synthetic wound dressing materials will be introduced which will be specifically designed for compromised wounds or for wounds with specific liabilities. Throughout this period, choices among these dressings should be based upon a firm understanding of the biology of wound healing. The most important concept to be emphasized is that the use of a single type of dressing for many types of wounds is not efficient and that individual dressings designed for specific purposes are advantageous, particularly when seeking optimum wound healing.

A revolution in wound management is currently in progress.

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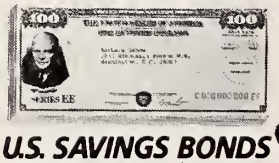


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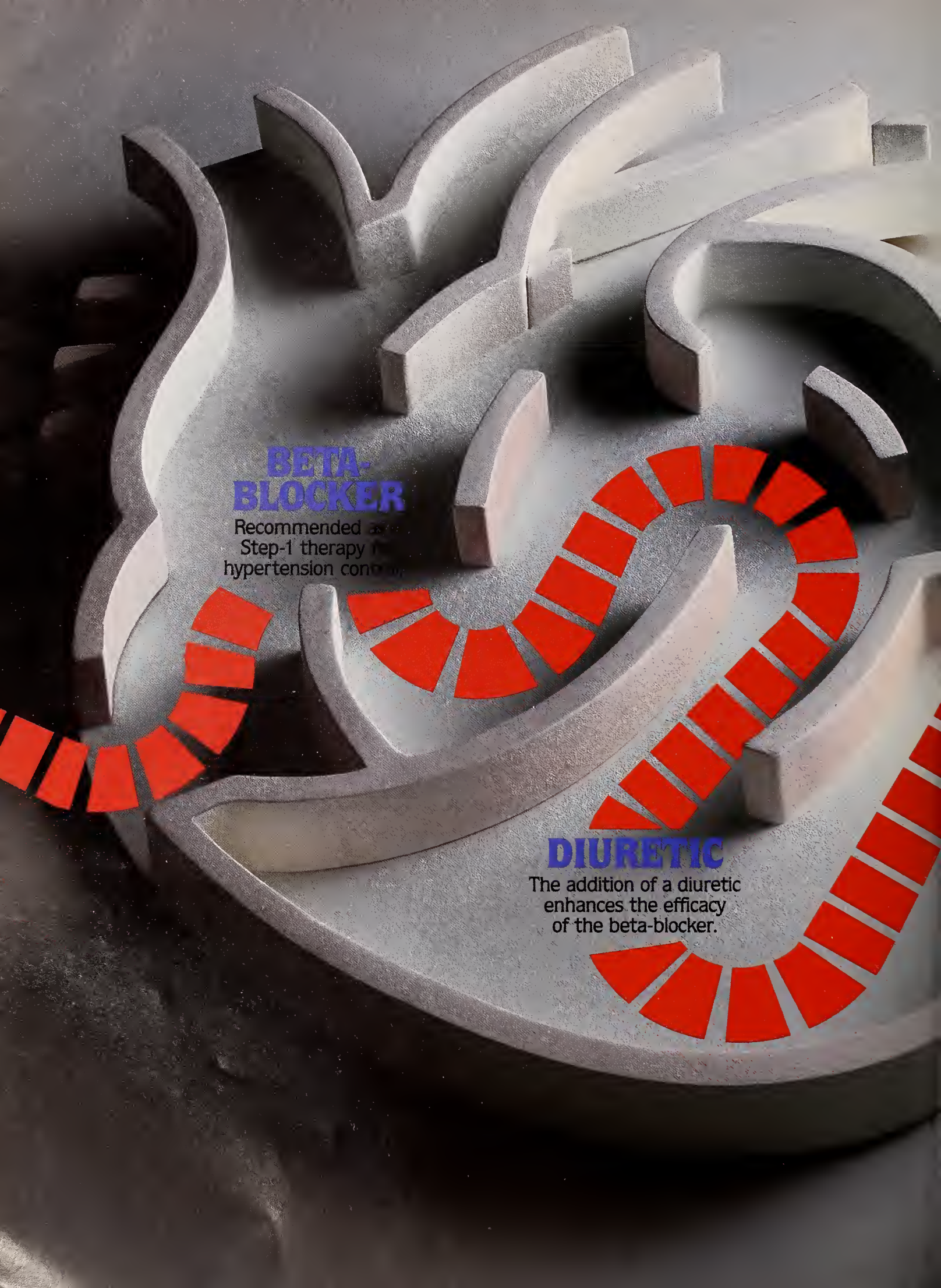
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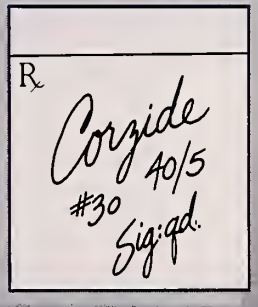
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CONTRAINDICATIONS: Nadolol — Bronchial asthma, sinus bradycardia and greater than first degree conduction block, cardiogenic shock, and overt cardiac failure (see WARNINGS). **Bendroflumethiazide** — Anuria, and in those with previous hypersensitivity to bendroflumethiazide or other sulfonamide-derived drugs.

WARNINGS: Nadolol — Cardiac Failure — Sympathetic stimulation may be a vital component supporting circulatory function in patients with congestive heart failure, and its inhibition by beta-blockade may precipitate more severe failure. Although beta-blockers should be avoided in overt congestive heart failure, if necessary, they can be used with caution in patients with a history of failure who are well compensated, usually with digitalis and diuretics. Beta-adrenergic blocking agents do not abolish the inotropic action of digitalis on heart muscle. IN PATIENTS WITHOUT A HISTORY OF HEART FAILURE, continued use of beta-blockers can, in some cases, lead to cardiac failure. Therefore, at the first sign or symptom of heart failure, digitalize and/or give diuretics, and closely observe response, or discontinue nadolol (gradually, if possible).

Exacerbation of Ischemic Heart Disease Following Abrupt Withdrawal — Hypersensitivity to catecholamines has been observed in patients withdrawn from beta-blocker therapy; exacerbation of angina and, in some cases, myocardial infarction have occurred after *abrupt* discontinuation of such therapy. When discontinuing chronic use of nadolol, particularly in patients with ischemic heart disease, gradually reduce dosage over a 1- to 2-week period and carefully monitor the patient. Reinstitute nadolol promptly (at least temporarily) and take other measures appropriate for management of unstable angina if angina markedly worsens or acute coronary insufficiency develops. Warn patients not to interrupt or discontinue therapy without physician's advice. Because coronary artery disease is common and may be unrecognized, it may be prudent not to discontinue nadolol therapy abruptly even in patients treated only for hypertension.

Nonallergic Bronchospasm (e.g., chronic bronchitis, emphysema) — PATIENTS WITH BRONCHOSPASTIC DISEASES SHOULD IN GENERAL NOT RECEIVE BETA-BLOCKERS. Administer nadolol with caution since it may block bronchodilation produced by endogenous or exogenous catecholamine stimulation of $beta_2$ receptors. **Major Surgery** — Because beta blockade impairs the ability of the heart to respond to reflex stimuli and may increase the risks of general anesthesia and surgical procedures, resulting in protracted hypotension or low cardiac output, it has generally been suggested that such therapy should be withdrawn several days prior to surgery. Recognition of the increased sensitivity to catecholamines of patients recently withdrawn from beta-blocker therapy, however, has made this recommendation controversial. If possible, withdraw beta-blockers well before surgery takes place. In emergency surgery, inform the anesthesiologist that the patient is on beta-blocker therapy. Use of beta-receptor agonists such as isoproterenol, dopamine, dobutamine, or levarterenol can reverse the effects of nadolol. Difficulty in restarting and maintaining the heart beat has also been reported with beta-adrenergic receptor blocking agents. **Diabetes and Hypoglycemia** — Beta-adrenergic blockade may prevent the appearance of premonitory signs and symptoms (e.g., tachycardia and blood pressure changes) of acute hypoglycemia. This is especially important with labile diabetics. Beta-blockade also reduces release of insulin in response to hyperglycemia; therefore, it may be necessary to adjust dose of antidiabetic drugs. **Thyrotoxicosis** — Beta-adrenergic blockade may mask certain clinical signs (e.g., tachycardia) of hyperthyroidism. To avoid abrupt withdrawal of beta-adrenergic blockade which might precipitate a thyroid storm, carefully manage patients suspected of developing thyrotoxicosis.

Bendroflumethiazide — Use with caution in severe renal disease. In patients with renal disease, azotemia may be precipitated. With impaired renal function, effects of the drug may be cumulative. Use with caution in impaired hepatic function or progressive liver disease, since minor alterations of fluid and electrolyte balance may precipitate hepatic coma. Sensitivity reactions may occur in patients with a history of allergy or bronchial asthma. Possibility of exacerbation or activation of systemic lupus erythematosus has been reported.

PRECAUTIONS: General — Nadolol — Use with caution in patients with impaired hepatic or renal function (see DOSAGE AND ADMINISTRATION).

Bendroflumethiazide — At appropriate intervals, perform serum electrolytes determination to detect possible electrolyte imbalance warning signs of which are dryness of mouth, thirst, weakness, lethargy, drowsiness, restlessness, muscle pains or cramps, muscular fatigue, hypotension, oliguria, tachycardia, and G.I. disturbances such as nausea and vomiting. Observe patients for clinical signs of fluid or electrolyte imbalance; namely, hyponatremia, hypochloremic alkalosis, hypokalemia. Serum and urine electrolyte determinations are particularly important when the patient is vomiting excessively or receiving parenteral fluids. Drugs such as digitalis may influence serum electrolytes. Hypokalemia may develop, especially with brisk diuresis, in presence of severe cirrhosis. Interference with adequate oral electrolyte intake will also contribute to hypokalemia. Response of the heart to toxic effects of digitalis can be exaggerated with hypokalemia. Use potassium supplements such as high potassium foods to avoid or treat hypokalemia. Any chloride deficit is generally mild and usually does not require specific therapy except under extraordinary circumstances (as in liver or renal disease). Dilutional hyponatremia may occur in edematous patients in hot weather; appropriate therapy is water restriction rather than salt administration except in rare instances when the hyponatremia is life threatening. In actual salt depletion, appropriate replacement is the therapy of choice.

Hyperuricemia may occur or frank gout may be precipitated in certain thiazide-treated patients. Latent diabetes mellitus may become manifest during thiazide therapy. Antihypertensive effects of bendroflumethiazide may be enhanced in the postsympathectomy patient.

Careful reappraisal of therapy and consideration given to withholding or stopping diuretic therapy is necessary if rising nonprotein nitrogen or BUN (indicative of progressive renal impairment) occurs. Thiazides may decrease serum PBI levels without signs of thyroid disturbance. Thiazides decrease calcium excretion. Pathologic changes in parathyroid gland with hypercalcemia and hypophosphatemia have been occasionally observed with prolonged therapy. Common complications of hyperparathyroidism have not been seen.

Information for Patients — Warn patients, especially those with evidence of coronary artery insufficiency, against interruption or discontinuation of nadolol without physician's advice. Although cardiac failure rarely occurs in properly selected patients, advise patients being treated with beta-adrenergic blocking agents to consult physician at the first sign or symptom of impending failure. Advise patients of proper course if dose inadvertently missed.

Laboratory Tests — Regularly monitor serum and urine electrolyte levels (see WARNINGS, *Bendroflumethiazide*, and PRECAUTIONS, *General, Bendroflumethiazide).*

Drug Interactions — Nadolol — When administered concurrently the following drugs may interact with beta-adrenergic blocking agents: **Anesthetics, general** — exaggeration of anesthetic-induced hypotension (see WARNINGS, *Nadolol, Major Surgery).* **Antidiabetic drugs (oral agents and insulin)** — hypoglycemia or hyperglycemia; adjust antidiabetic drug dosage accordingly (see WARNINGS, *Nadolol, Diabetes and Hypoglycemia).* **Catecholamine-depleting drugs (e.g., reserpine)** — additive effect; monitor closely for evidence of hypotension and/or excessive bradycardia.

Bendroflumethiazide — When administered concurrently the following drugs may interact with thiazide diuretics: **Alcohol, barbiturates, or narcotics** — may potentiate orthostatic hypotension. **Antidiabetic drugs (oral agents and insulin)** — thiazide-induced hyperglycemia may require adjustment of antidiabetic drug dosage. **Other antihypertensive drugs** — additive or potentiated effect. **Corticosteroids, ACTH** — intensified electrolyte depletion, particularly hypokalemia. **Ganglionic or peripheral adrenergic blocking drugs** — potentiated effect. **Preanesthetic and anesthetic agents** — effects may be potentiated; adjust dosage accordingly. **Pressor amines (e.g., norepinephrine)** — possible decrease response but not sufficient to preclude their use. **Skeletal muscle relaxants, nondepolarizing (e.g., tubocurarine)** — possible increased response.

Drug/Laboratory Test Interactions — Discontinue thiazides before tests for parathyroid function (see PRECAUTIONS, *General, Bendroflumethiazide).*

Carcinogenesis, Mutagenesis, Impairment of Fertility — Nadolol — In 1 to 2 years oral toxicologic studies in mice, rats, and dogs, nadolol did not produce significant toxic effects. In 2-year oral carcinogenic studies in rats and mice, nadolol did not produce neoplastic, preneoplastic, or nonneoplastic pathologic lesions. **Bendroflumethiazide** — Long-term studies in animals have not been performed.

Pregnancy — Teratogenic Effects — Nadolol — Category C. In animal reproduction studies with nadolol, evidence of embryo- and fetotoxicity was found in rabbits, but not in rats or hamsters, at doses 5 to 10 times greater (on a mg/kg basis) than the maximum indicated human dose; no teratogenic potential was seen in any of these species. There are no well-controlled studies in pregnant women; therefore, use nadolol in pregnant women only if potential benefit justifies potential risk to the fetus. **Bendroflumethiazide —** Category C. Animal reproduction studies have not been conducted. This drug's effect on the fetus when administered to a pregnant woman or its effect on reproductive capacity is not known. Bendroflumethiazide should be given to a pregnant woman only if clearly needed. **Nonteratogenic Effects** — Since thiazides cross the placental barrier and appear in cord blood, weigh anticipated benefit of the drug in pregnant women against possible hazards to the fetus; these hazards include fetal or neonatal jaundice, thrombocytopenia, and possibly other reactions which have occurred in adults.

Nursing Mothers — Both nadolol and bendroflumethiazide are excreted in human milk. Because of the potential for serious adverse reactions in nursing infants either discontinue nursing or discontinue therapy, taking into account the importance of CORZIDE (Nadolol-Bendroflumethiazide Tablets) to the mother.

Pediatric Use — Safety and effectiveness in children have not been established.

ADVERSE REACTIONS: Nadolol — Most adverse effects have been mild and transient and have rarely required nadolol withdrawal. **Cardiovascular** — Bradycardia with heart rates of less than 60 beats per minute occurs commonly, and heart rates below 40 beats per minute and/or symptomatic bradycardia were seen in about 2 of 100 patients. Symptoms of peripheral vascular insufficiency, usually of the Raynaud type, have occurred in approximately 2 of 100 patients. Cardiac failure, hypotension, and rhythm/conduction disturbances have each occurred in about 1 of 100 patients. Single instances of first degree and third degree heart block have been reported; intensification of AV block is a known effect of beta-blockers (see also CONTRAINDICATIONS, WARNINGS, and PRECAUTIONS). **Central Nervous System** — Dizziness or fatigue reported in approximately 2 of 100 patients; paresthesias, sedation, and change in behavior reported in approximately 6 of 1000 patients. **Respiratory** — Bronchospasm reported in approximately 1 of 1000 patients (see CONTRAINDICATIONS and WARNINGS). **Gastrointestinal** — Nausea, diarrhea, abdominal discomfort, constipation, vomiting, indigestion, anorexia, bloating, and flatulence each reported in 1 to 5 of 1000 patients. **Miscellaneous** — Each of the following reported in 1 to 5 of 1000 patients: rash; pruritus; headache; dry mouth, eyes, or skin; impotence or decreased libido; facial swelling; weight gain; slurred speech; cough; nasal stuffiness; sweating; tinnitus; blurred vision. Although relationship to drug usage is not clear, sleep disturbances have been reported. The oculomucocutaneous syndrome associated with practolol has not been reported with nadolol. The following adverse reactions may also occur: **Central Nervous System** — reversible mental depression progressing to catatonia; visual disturbances; hallucinations; an acute reversible syndrome characterized by disorientation for time and place, short-term memory loss; emotional lability with slightly clouded sensorium, decreased performance on neuropsychometrics. **Gastrointestinal** — mesenteric arterial thrombosis; ischemic colitis. **Hematologic** — agranulocytosis; thrombocytopenic or nonthrombocytopenic purpura. **Allergic** — fever combined with aching and sore throat; laryngospasm; respiratory distress. **Miscellaneous** — reversible alopecia; Peyronie's disease; erythematous rash; arterial insufficiency.

Bendroflumethiazide — Gastrointestinal System — anorexia, gastric irritation, nausea, vomiting, cramping, diarrhea, constipation, jaundice (intrahepatic cholestatic jaundice), pancreatitis. **Central Nervous System** — dizziness, vertigo, paresthesia, headache, xanthopsia. **Hematologic** — leukopenia, agranulocytosis, thrombocytopenia, aplastic anemia. **Dermatologic-Hypersensitivity** — purpura, photosensitivity, rash, urticaria, necrotizing angiitis (vasculitis, cutaneous vasculitis). **Cardiovascular** — orthostatic hypotension may occur. **Other** — hyperglycemia, glycosuria, occasional metabolic acidosis in diabetics, hyperuricemia, allergic glomerulonephritis, muscle spasm, weakness, restlessness. Whenever adverse reactions are moderate or severe, thiazide dosage should be reduced or therapy withdrawn.

OVERDOSAGE: Nadolol may cause excessive bradycardia, cardiac failure, hypotension, or bronchospasm if overdosed. Overdosage of thiazides may cause lethargy, which may progress to coma within a few hours, with minimal depression of respiration and cardiovascular function and without evidence of serum electrolyte changes or dehydration. Gastrointestinal irritation and hypermotility may occur. Transitory increase in BUN and serum electrolyte changes may occur, especially in patients with renal impairment.

Treatment — Nadolol can be removed from the general circulation by hemodialysis. In determining duration of corrective therapy, take note of the long duration of the effect of nadolol. In addition to gastric lavage, employ the following measures, as appropriate. **Excessive Bradycardia** — Administer atropine (0.25 to 1.0 mg). If there is no response to vagal blockade, administer isoproterenol cautiously. **Cardiac Failure** — Administer a digitalis glycoside and diuretic. It has been reported that glucagon may also be useful in this situation. **Hypotension** — Administer vasopressors, e.g., epinephrine or levarterenol. (There is evidence that epinephrine may be the drug of choice.) **Bronchospasm** — Administer a $beta_2$-stimulating agent and/or a theophylline derivative. **Stupor or Coma** — Supportive therapy as warranted. **Gastrointestinal Effects** — Symptomatic treatment as needed. **BUN and/or Serum Electrolyte Abnormalities** — Institute supportive measures as required to maintain hydration, electrolyte balance, respiration, and cardiovascular and renal function.

DOSAGE AND ADMINISTRATION: DOSAGE MUST BE INDIVIDUALIZED. Patients with renal failure require adjustment in dosing interval; see package insert for dosage in these patients.

Consult package insert before prescribing CORZIDE (Nadolol-Bendroflumethiazide Tablets).

HOW SUPPLIED: Available as scored tablets containing 40 mg nadolol combined with 5 mg bendroflumethiazide and 80 mg nadolol combined with 5 mg bendroflumethiazide in bottles of 100.

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Evaluation and Treatment of Hemifacial Spasm

Harold Colbassani, Jr., M.D., George T. Tindall, M.D., Suzie C. Tindall, M.D.

Introduction

Hemifacial spasm (HFS) is characterized by unilateral, involuntary, spasmodic contraction of the muscles innervated by the seventh cranial nerve. The spasms are frequently aggravated by emotional upset and fatigue, and voluntary facial movements will often initiate an attack of facial spasm, a phenomenon referred to as synkinesis. It is a distressing clinical condition, and patients are often so embarrassed by this incessant facial twitching that they become withdrawn, socially and professionally (Figures 1 & 2). Unfortunately, many patients are seen by physicians who interpret this disorder as psychogenic. They are prescribed multiple medications which are of no benefit, and the patient only grows more weary of this affliction. A review of the major published series reveals the mean age of onset to be 49 years, with a female predominance of more than 2:1.[5, 8, 10, 12, 17, 23, 26] The incidence of right versus left sided spasm is equal, and the duration of symptoms prior to presentation averages 5.8 years.[5, 8, 10, 12, 17, 23, 26] In most instances, HFS is caused by anomalous vascular compression of the facial nerve at its junction with the brainstem (root entry-exit zone).[10, 13, 17, 23, 26] Medical therapy is generally ineffective, although some relief with the use of carbamazepine has been reported.[1] However, controlled clinical trials are lacking. Definitive treatment is surgical and involves microvascular decompression (MVD) of the involved facial nerve. Employing the operative microscope and current microsurgical technique, the operative morbidity is acceptably low.[10, 12, 13, 17, 23, 26]

In this paper, we will discuss our experience with microvascular decompression for hemifacial spasm. The various pathophysiologic mechanisms involved in the generation of HFS and a review of the present literature will also be presented.

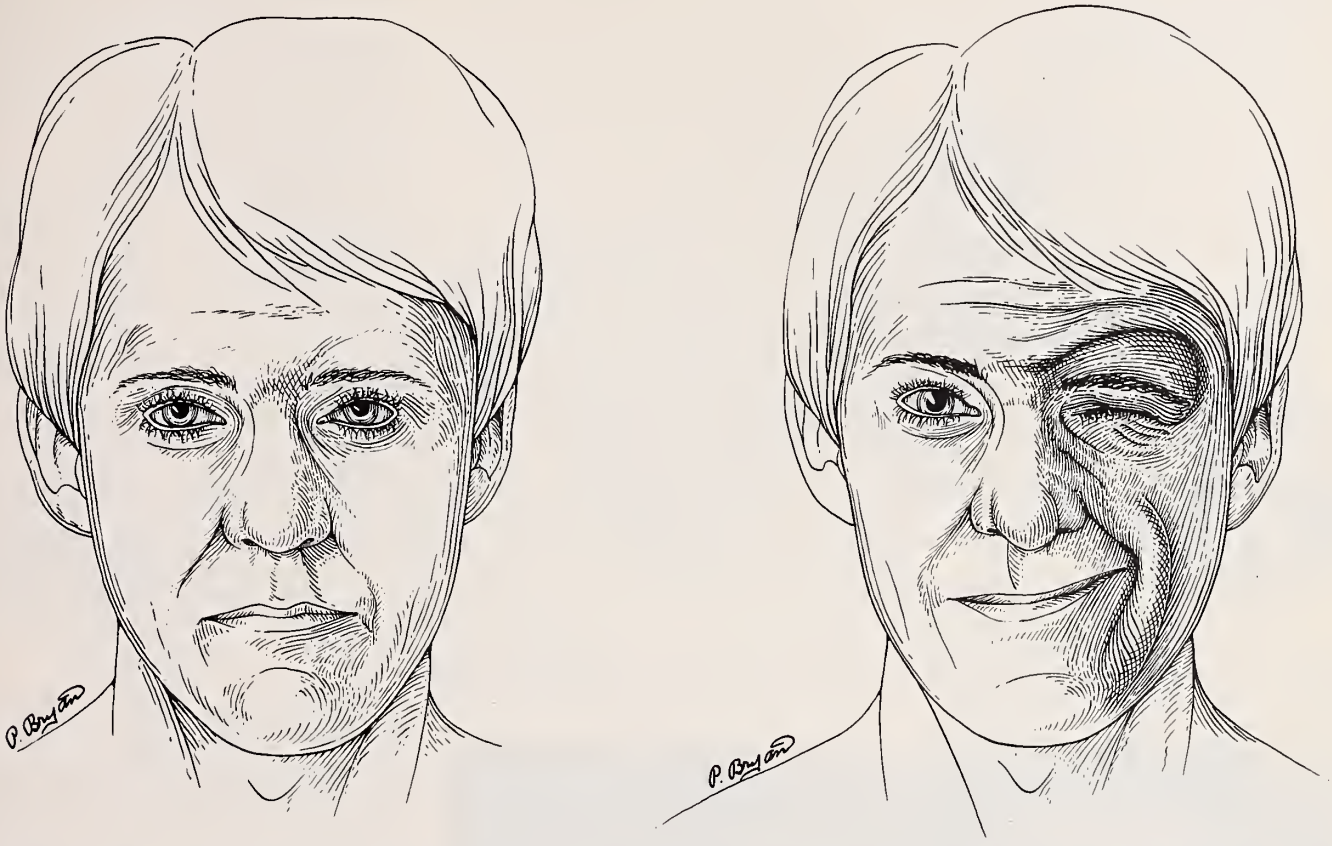
This paper discusses the authors' experience with microvascular decompression for hemifacial spasm.

Case Material

From April 1976 through July 1983, 20 patients underwent retromastoid craniectomy with microvascular decompression of the facial nerve for hemifacial spasm. Patients were seen at 6 months postoperatively, and pertinent history and physical findings were documented. Recent follow-up information was obtained by telephone contact in each instance. Clinic visits were not feasible in many cases because of the geographical distance from the medical center. Each patient was spoken with in depth and asked to assess the outcome of surgery and the complications which resulted from this procedure.

The characteristics of this group of patients are outlined in Table 1. The age of onset of HFS ranged from 31 to 74 years, with a mean of 52 years. There were 17 women and 3 men. Laterality of spasm was equal, with 10 patients possessing left-sided spasm and 10, right-sided spasm. The duration of the symptoms ranged from less than 1 year to more than 18 years, with a mean of 5.8 years. Initial symptomatology in all 20 consisted of periocular twitching which progressed in severity to involve the remainder of the facial muscles. Hemifacial spasm occurred episodically, often increasing in frequency during each attack until a brief tonic facial contraction was present. Stress and fatigue often aggravated this clinical condition, and in many patients, facial spasms persisted during sleep. Twelve patients stated that facial movements would often precipitate an attack of facial spasm (i.e., synkinesis). Two patients with left-sided HFS stated that their symptoms worsened when they lay on their left side as opposed to their right. One patient had a spontaneous remission which lasted 4 months, but the HFS then recurred more vigorously than

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Figures 1 and 2 — Example of a patient with HFS, at rest (left) and during active spasm of the facial muscles (right).

ever. Preoperative facial weakness was present in eight patients. Only one patient presented with evidence of ipsilateral hearing loss.

Preoperative medical management which included diphenylhydantoin, carbamazepine, haloperidol, diazepam, and phenobarbital, was tried in nearly all patients and was ineffective. In a few cases, these medications resulted in a significant adverse reaction. Two patients developed leukopenia while taking carbamazepine, and haloperidol induced transient extrapyramidal symptoms in another.

The diagnostic evaluation consisted of a contrast-enhanced computerized tomographic (CT) scan through the posterior fossa to exclude the possibility of tumor or vascular malformation. In all patients, the CT scan was normal. Angiography was performed in only 2 cases very early in the series. The first study was normal, and the second revealed an ectatic vertebral artery projecting into the left cerebellopontine angle. This was the side appropriate for the patient's spasm, and at surgery, the vertebral artery was found to be responsible for compression of the seventh nerve. Electromyograms (EMG) were performed in only two patients preoperatively. In addition to the appearance of synchronous, intermittent bursts, there was noted a reduction in voluntary motor units suggestive of a mild conduction defect. EMGs were not done postoperatively.

Table 1 — Characteristics of Patients with Hemifacial Spasm (N-20)

Mean Age of Onset (years)	52 (31-74)
Male/Female Distribution	3/17
Laterality of Spasm (right/left)	10/10
Mean Duration of Symptoms (years)	5.8 (1-18)
Presence of Synkinesis	12
Preoperative Facial Weakness	8
Response to Medical Therapy	0

Two patients had additional pathologic entities. One had a pituitary adenoma which was removed by the transsphenoidal approach during the same hospitalization. The second patient had associated glossopharyngeal neuralgia on the ipsilateral side. The latter patient noted the onset of HFS 10 years prior to presentation. The clinical course of the spasm progressed as would be expected until 7 years later when she developed symptoms of classical glossopharyngeal neuralgia. At presentation, she was found to have right-sided HFS, right facial weakness, and dysfunction of the ipsilateral glossopharyngeal and vagus nerves. She did not have hypertension.

Two patients had previously undergone a transaural approach to the facial nerve within the temporal bone at other institutions. Attempted decompression had been performed by un-

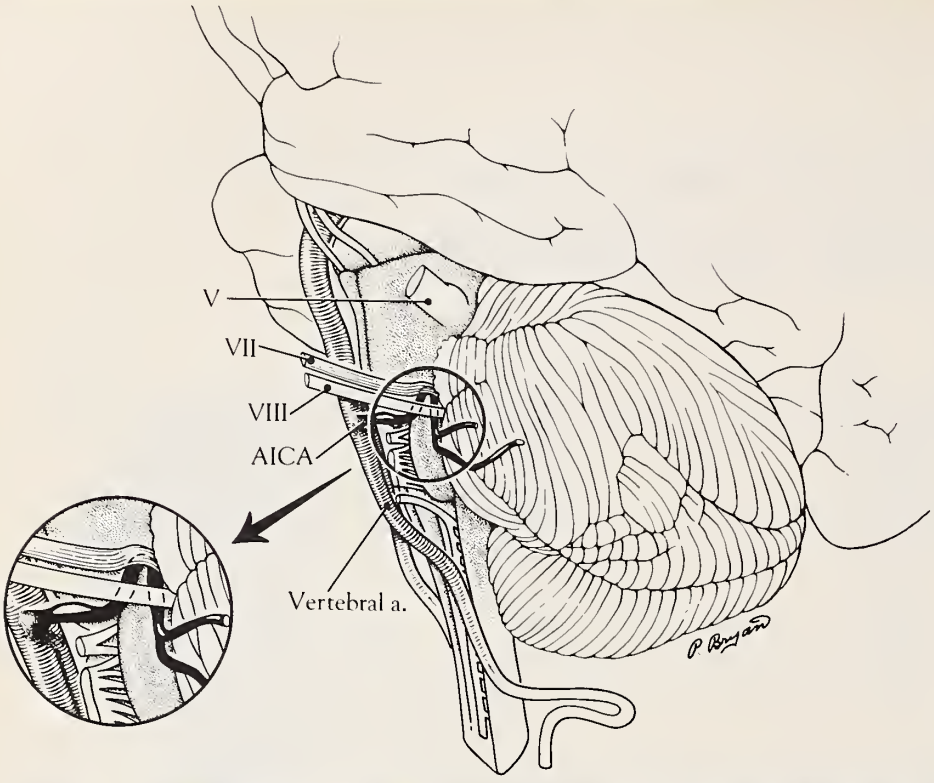


Figure 3 — Demonstration of vascular compression of CN VII at the root entry-exit zone.



Figure 4 — Operative photograph of the vascular compression shown in Figure 3. The facial nerve is identified by the black arrow. AICA (white arrow) is seen looping superiorly, compressing the anterocaudal aspect of CN VII. The IXth, Xth, and XIth cranial nerves are also seen inferiorly.

roofing the facial canal from the geniculate ganglion to the stylomastoid foramen. This procedure had been repeated in one of these patients. Neither patient derived any significant relief, and both were left with profound hearing deficits.

All patients underwent a retromastoid craniectomy for MVD as described elsewhere.12 Sixteen patients were placed in the sitting position, and the last four were placed in a supine position with the head turned toward the contralateral side. Actual microvascular decompression was maintained with either pledgets of muscle or Ivalon sponge (polyvinyl alcohol foam, Upipoint Laboratories, High Point, N.C.). In two instances, a piece of silastic ventricular tubing was used successfully.

Results

An abnormal neurovascular relationship at the root entry-exit zone of the seventh cranial nerve was found in each case (Figures 3-5). The vessels implicated were the anterior inferior cerebellar artery (AICA) in 10; the posterior inferior cerebellar artery (PICA) in three; the vertebral artery in one; multiple vessels in four; and in two of the cases, the exact artery could not be determined. In no case was a vein found to be responsible. In every instance, the point of contact was at the caudal aspect of the nerve at the root entry-exit zone. The only exception was a case in which two vessels were involved. One of the arteries was at the rostral or superior aspect of the seventh nerve and the other at the inferior border. The anterior-posterior position was specified in only 6 cases, in which the vessel had contact with the nerve posteriorly in four and anteriorly in two. Jannetta[12] considers that classical hemifacial spasm is caused by compression of the anterior-caudal portion of the facial nerve. Our continued experience with HFS tends to support this. Actual grooving of the seventh nerve was noted in eight cases. Definite compression but without grooving was noted in seven, and the remaining five displayed only arterial contact.

Two patients required reoperation for recurrence of hemifacial spasm.

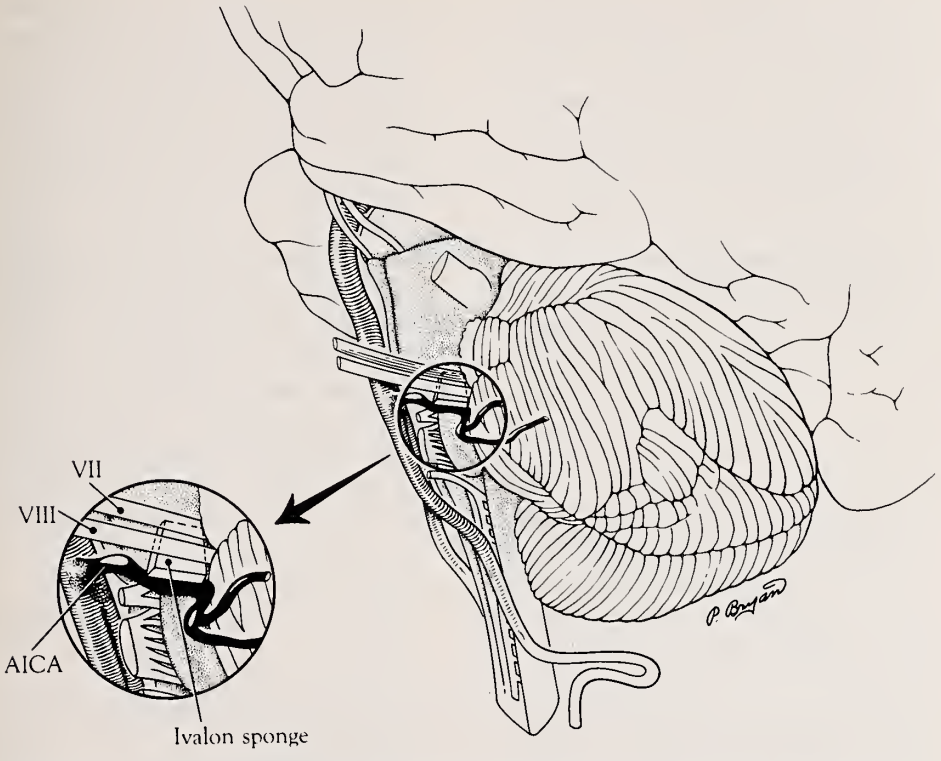


Figure 5 — Decompression of the vascular loop shown in Figure 3 is maintained by a piece of Ivalon sponge (Unipoint Laboratories, High Point, N.C.)

Table 2 — Operative Results of Microvascular Decompression for Hemifacial Spasm (N-20)

Mean Follow-up (years)	3.4 (1-8.3)
Excellent Result	14
Good Result	2
Inadequate Result	3
Mortality	1

Table 3 — Neurologic Complications of Microvascular Decompression (N-20)

Permanent		
Facial Weakness —	Major	0
	Minor	1
Hearing Loss —	Major	2
	Minor	1
Vestibular Symptoms		1
Transient		
Facial Weakness		1
Conductive Hearing Loss		2
Diplopia		2
Hoarseness		1
Aseptic Meningitis		1
Herpetic Eruption		1

The first patient was free of spasm immediately following the initial procedure and remained so for 6 weeks. At the time of the second operation, the previously decompressed vascular loop was still in position, and a second loop was noted more anteriorly. This was decompressed, and she has remained free of HFS since. The second patient was essentially unchanged postoperatively after the first procedure. At the time of reexploration 1 week later, the vertebral artery appeared adequately decompressed; however, a second, previously unrecognized arterial branch of the superior cerebellar artery (SCA) was noted to groove the facial nerve superiorly. Decompression of this vessel relieved the facial spasm immediately postoperatively.

The patient with combined HFS and glossopharyngeal neuralgia had an ectatic loop of the PICA which compressed the root entry-exit zone of the facial nerve above and the glossopharyngeal nerve below. In addition, a loop of the AICA required decompression of the inferior aspect of the facial nerve. While the patient has remained free of HFS, the pharyngeal pain persists, although it is improved from its preoperative level.

The results of MVD are presented in Table 2. Among the 20 cases, the length of follow up ranged from 1 to 8.3 years, with a mean of 3.4 years. Overall, 14 of 19 (74%) patients obtained an excellent result, defined as freedom from all spasms. Two patients (10%) derived a good result, defined as only intermittent brief spasms, while three other patients (16%) had a recurrence, although the severity of their spasms was somewhat less than preoperatively. One patient, an elderly woman of 75, died. She derived immediate relief of her HFS and was discharged 12 days following her surgery. She was readmitted within 1 week of discharge with signs of fulminant meningitis and succumbed shortly thereafter.

Permanent neurologic complications occurred in four patients (20%). They were considered major if a significant disability or disfigurement resulted. If not, they were considered minor (Table 3). Facial weakness was present in one patient and was considered minor. Hearing loss occurred in three patients, two of which were significant deficits, while the other was minor in degree. One of the patients with hearing loss also developed significant vestibular symptoms. Thus, the incidence of cranial nerve impairment in our series was 25%; however, in only 15% was this considered major.

Transient deficits included mild facial weakness in one and hoarseness in another patient. Two patients sustained temporary hearing loss probably secondary to a conductive loss due to a collection of fluid behind the tympanic membrane. Diplopia occurred for a brief period in two patients. One other patient developed a herpetic eruption in the first and second division of the trigeminal nerve ipsilateral to the surgical site, and a final patient developed aseptic meningitis which resolved on dexamethasone therapy. Despite the predominant use of the sitting position in this series, clinically significant air embolization did not occur.

Discussion

It is generally accepted that vascular compression at the root entry-exit zone of the seventh cranial nerve is

the underlying cause of hemifacial spasm.[10, 13, 17, 23, 26] In fact, similar neurovascular relationships have also been noted in other cranial nerve rhizopathies.[4, 6, 13, 14, 16, 23] This is best exemplified by the clinical condition of classic trigeminal neuralgia in which an anomalous vascular loop can be found compressing the fifth cranial nerve at the root entry-exit zone in the majority of cases.[4, 13, 23] Early important observations were made by Dandy,[4] Campbell and Keedy,[3] and Gardner and Sava.[8] However, it was primarily through the work of Jannetta that decompression of these vascular loops has been shown to be curative in the majority of patients.[11-14, 16, 22, 24]

The results of microvascular decompression for hemifacial spasm are quite good, and the operative morbidity and mortality are acceptably low. The only absolute contraindication to this surgical procedure is contralateral hearing loss.

Several neurophysiologic studies have been performed in both experimental animals and man and may provide an explanation for these clinical observations.[2, 9, 11, 15, 18, 22] In 1944, Kugelberg[15] recorded the electrical activity of nerve fibers both during and following a period of local compressive ischemia, obtained by applying a pneumatic cuff to a limb. He discovered that spontaneous electrical activity could be recorded distal to this stimulus. In addition, this compressive injury created a hyperexcitable state such that transmission of impulses through this "focus of injury" would elicit an unexpected electrical discharge ("burst activity"). In experimental animals, Granit and Skoglund[9] created an artificial synapse between motor and sensory nerves by applying a compressive injury to a peripheral nerve. Subsequently, Gardner and Sava[8] proposed that vascular compression at the root entry-exit zone resulted in a "short-circuiting" of electrical impulses. Thus, spontaneous discharges as well as bursts resulting from efferent impulses would produce the well recognized attacks of HFS. In view of the findings of Granit and Skoglund, the phenomenon of synkinesis so often seen in HFS could also be explained on the basis of transmission of impulses between nerve fibers at the root entry-exit zone, so called "ephaptic transmission." More recently, electrophysiologic studies performed in patients with HFS have supported this conclusion.[20-22]

Pathologic confirmation of this "artificial synapse" is lacking, and the few reports available are inconclusive.[10, 24] However, they suggest demyelination may play a role in the genesis of HFS. Indeed, decreased insulation between neural fibers would allow "ephaptic transmission" to occur more readily. Demyelination (and possible axon damage) would also explain the facial weakness which is often present in HFS. In addition, Jannetta[11] and Nielsen[21, 22] have reported electrophysiologic evidence of demyelination in patients with HFS.

Several other investigators have proposed that the neural injury caused by the vascular compression at the root entry-exit zone may result in deafferentation with subsequent disorganization of the facial nucleus.[7, 25] Physiologic data recently reported by Moller[19] lends support to this hypothesis. However, the prompt relief of HFS in most patients following MVD argues strongly against this concept.

Currently and as emphasized in this report, the operative procedure of choice for hemifacial spasm is microvascular decompression of the involved facial nerve at the root entry-exit zone. Jannetta[12] and others[17, 23] have noted that vascular compression of the seventh nerve is most often caused by PICA although AICA has been implicated in almost as many cases. Wilson[26] found AICA to be responsible in the majority of his cases, though the difference was not significant. The vertebral artery is generally third in importance followed by the basilar artery and the internal acoustic artery. Veins have been implicated in about 1% of cases.

The only diagnostic test required is a contrast-enhanced CT scan of the posterior fossa to exclude the presence of a tumor or vascular malformation.

The results of MVD for HFS are quite good, and the operative morbidity and mortality are acceptably low. The only absolute contraindication to this surgical procedure is contralateral hearing loss. This is because of the attendant risk of eighth nerve damage. Associated systemic illnesses (e.g., hypertensive vascular disease, diabetes mellitus) and age should be considered relative contraindications. Jannetta[13] has reported an excellent or good result in 97.8% of his patients. Iwakuma[10] has reported similar results, although his length of follow up was not as long. Wilson[26] and Loeser[17] individually followed their patients for 2.5 years and had a favorable outcome in 91 and 85%, respectively. Piatt and Wilkins[23] most re-

cently reported an 87.5% excellent or good result, with an average follow up of 3.5 years. Our follow up is similar, and our results compare favorably. Although the majority of patients undergoing MVD experience immediate relief, approximately 20% will have delayed alleviation of their spasm postoperatively.[10, 12, 23, 26] The time period is variable, and symptoms may persist for several months. In our series, four patients (20%) had delayed resolution of their spasm, and in one patient, symptoms lingered for 13 months. Most investigators believe the facial nerve in these patients is more severely damaged.[10-12] Therefore, a period of critical remyelination is probably necessary.

In about 5% of patients who experience initial relief, there is a recurrence of symptoms.[10, 13, 17, 23, 26] Reexploration in these patients most often reveals another, previously unrecognized vascular loop compressing the root entry-exit zone. This is in agreement with our findings at reexploration. However, dislodgement of the prosthetic material used to splint the artery away from the nerve should also be considered.

The incidence of permanent neurologic complications following MVD is approximately 20% (10.2 to 25%). The deficit most commonly encountered is hearing loss (10%) followed by some degree of facial weakness (3.5%).[10, 12, 13, 23, 26] These figures compare quite favorably with our findings. Most investigators agree that either direct trauma or a stretch injury due to excessive retraction of the cerebellum is responsible for these cranial nerve deficits. Additional complications which have been noted in other series include vestibular symptoms, vocal cord paralysis, diminution of taste, spinal accessory weakness, and trigeminal hypalgesia.[13, 17, 23, 26] Operative mortality in over 400 cases reported in the literature is significantly less than 1%.[10, 12, 13, 17, 23, 26]

Summary

Classical hemifacial spasm is a clinical entity which is caused by compression of the facial nerve at the root entry-exit zone by an anomalous vascular loop. The only diagnostic test required is a contrast-enhanced CT scan of the posterior fossa to exclude the presence of a tumor or vascular malformation. The condition can be cured in the majority of patients by microsurgical decompression of the facial nerve. Operative complications most commonly include hearing loss or facial weakness. The operative morbidity and mortality are low.

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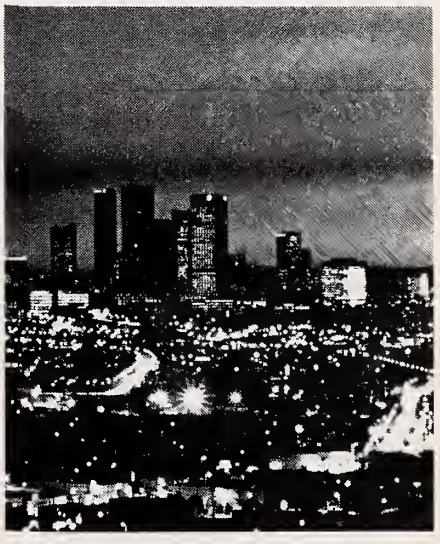
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Arthroscopic Synovectomy in the Rheumatoid Knee

Leslie L. Wilkes, M.D.

Introduction

Synovectomy in the rheumatoid knee has been a reliable operation for the temporary relief of pain. However, the morbidity of open synovectomy is not insignificant,[1, 2] and the enthusiasm for open synovectomy has diminished in recent years. With the recent expansion of arthroscopic surgical procedures and with the drastic reduction of morbidity, arthroscopic synovectomy has enjoyed a renewed popularity.[3] In 1981, the author presented a preliminary report on 30 patients 1-2 years following arthroscopic synovectomy.[4] The purpose of this report is to reevaluate those same patients 5 years following surgery.

The purpose of this report is to reevaluate 30 patients previously reported at 1-2 years postoperatively 5 years following open synovectomy.

Materials and Methods

Patients in this series were adults with active polyarticular rheumatoid arthritis unresponsive to nonoperative treatment for over 3 months. The average age was 39 years, and 75% of the patients were women. The procedure was performed under general or spinal anesthesia and under tourniquet control. A 5 millimeter arthroscope linked to a television monitor provided visualization. The suction cutting instrument is a 5 millimeter tube with a battery powered rotating blade inside. The synovium is sucked into the instrument's open barrel, cut by the rotating blade, and discharged through the suction tubing. The arthroscope and cutter are alternately used in one of four entry portals (medial and lateral infra patella, and medial and lateral supra patella) to remove as much synovium as possible. In an average case, about 50 grams of synovium are removed.

Results

The average length of hospitalization was 1½ days. Since postoperative pain was minimal, patients walked on the same day of surgery in every case, and most required no aid. Range of motion was started on the second day, and all patients achieved at least 90° of motion on the first day of instruction. None of the patients lost motion — an unfortunate but frequent problem with open synovectomy.

The postoperative results were rated using the clinical and subjective criteria of Laurin.[5] Radiographic criteria were not used. The results are depicted graphically in Figure 1. In the preliminary report of 1981, the average follow-up period was 18 months. At present, the average follow-up period is 57 months. The percentage of good or satisfactory results fell from 93.3% in 1981 to 56.7% in 1985. Only six patients stayed in the same grade. Ten patients lost one grade, 12 lost two grades, and two patients lost three grades. The average patient lost one grade. Fourteen (46.7%) underwent or await total replacement arthroplasty.

Discussion

The deterioration of the percentage of good or satisfactory results was expected. Recent studies have shown that the degree of pain relief after synovectomy diminishes with time.[6-8] It has also been shown that after 2 years, the visual, histologic, and enzymatic properties of the synovium are unchanged from their preoperative

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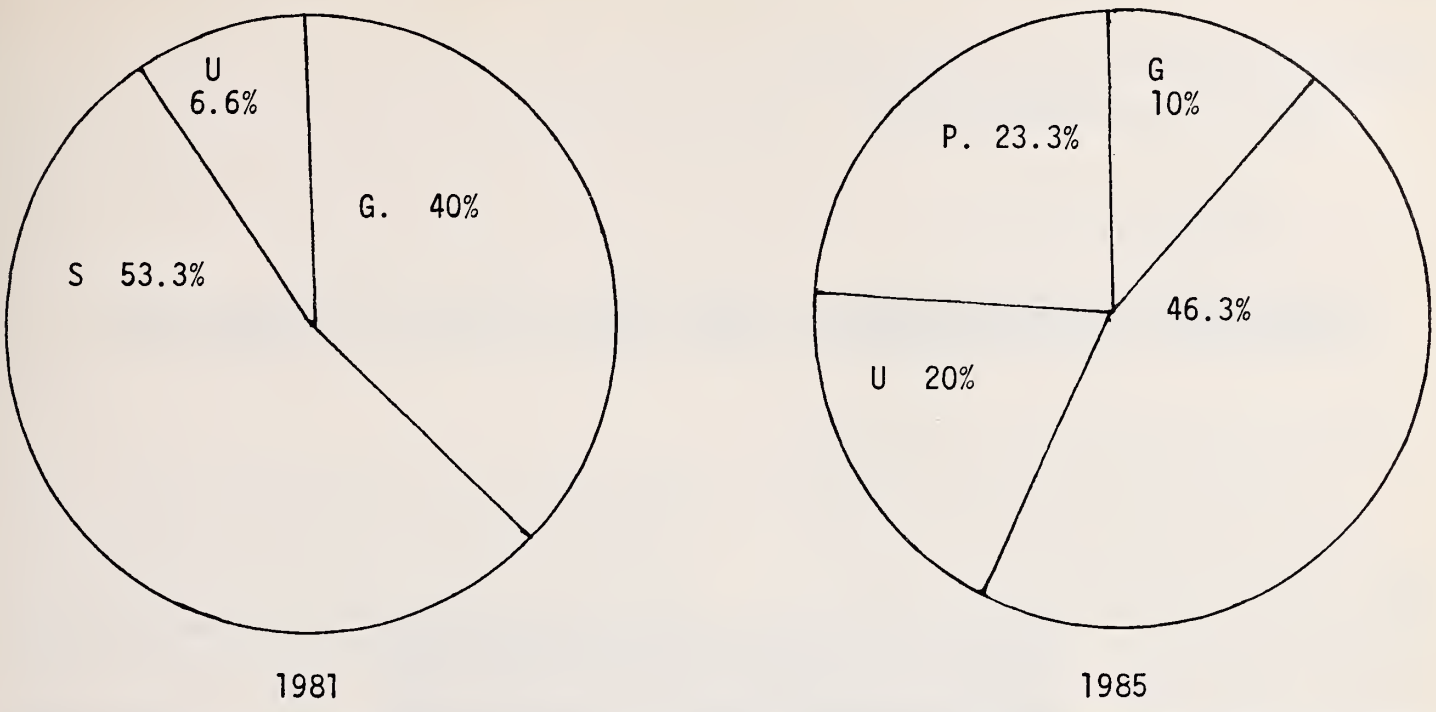


Figure 1: In 1981, 93.3% of the patients were either good or satisfactory. In 1985, the percentage of good and satisfactory had fallen 56.7%.

conditions.[9] In fact, synovectomy has little effect on eventual joint destruction.[5, 10]

Patients in this series were adults with active polyarticular rheumatoid arthritis unresponsive to non-operative treatment for over 3 months.

Synovectomy in rheumatoid joints must be considered a procedure for the temporary relief of pain. Since the morbidity rate is relatively high,[1] surgeons have been reluctant to perform open synovectomy. With the advent of arthroscopic synovectomy, however, the procedure now takes on a new effectiveness. The patients in this series had the same degree of pain relief expected after open synovectomy with minimal morbidity, cost, and time in the hospital. Although one can predict a slow erosion of the initial good results, synovectomy remains a reasonable option in the treatment of rheumatoid arthritis.

With the advent of arthroscopic synovectomy, the procedure now takes on a new effectiveness.

Summary

Thirty patients underwent arthroscopic synovectomy of the knee for rheumatoid arthritis. As predicted, the initial 93% good or satisfactory results at 18 months deteriorated to 56% at 5 years. However, because of the very low morbidity and cost, this operation should be considered when non-operative treatment cannot effect satisfactory pain relief.

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Health Legislation and the New Congress

Raymond D. Cotton, J.D.

The information in this article can be a valuable tool to assist physicians in monitoring and affecting the actions of legislators, especially with regard to such important issues as physician reimbursement, medical education, and research funding.

EVERY PIECE of medical and health legislation begins by being referred to one of four powerful committees of the Congress: The House Committee on Ways and Means, the House Committee on Energy and Commerce, the Senate Finance Committee and the Senate Committee on Labor and Human Resources.

In the House, the Ways and Means Committee, which consists of thirty-five (35) members, with a present ratio of twenty-three (23) Democrats to twelve (12) Republicans, is chaired by Congressman Dan Rostenkowski of Illinois. The Subcommittee on Health, through which Medicare and Medicaid bills are routed, consists of eleven (11) members, including Congressman Willis Gradison (R-OH):

Democrats	Republicans
Fortney W. (Pete) Stark (CA), Chairman	Willis Gradison (OH)
Andrew Jacobs, Jr. (IN)	Henson Moore (LA)
Charles R. Rangel (NY)	Hal Daub (NE)
James Jones (OK)	Judd Gregg (NH)
Brian Donnelly (MA)	
William Coyne (PA)	
J. J. (Jake) Pickle (TX)	

The House Committee on Energy and Commerce, chaired by Congressman John Dingell of Michigan, has jurisdiction over all matters affecting interstate commerce generally, including those related to health and health facilities. The full committee has forty-two (42) members and a combined staff of over fifty individuals. The Subcommittee on Health and the Environment includes under its jurisdiction hospital construction, mental health and research, biomedical programs, and protection of health generally (Medicaid issues, food and drug issues, drug abuse). Chaired by Congressman Henry Waxman of Los Angeles, this subcommittee presently consists of fourteen (14) Democrats, with the Republican members for the 99th Congress not yet selected. In addition to Mr. Waxman, the Democratic members are:

James Scheuer (NY)	Tim Wirth (CO)
Thomas Luken (OH)	Mickey Leland (TX)
Doug Walgren (PA)	Cardiss Collins (IL)
Barbara Milkulski (MD)	James Fiori (NJ)
Richard Shelton (AL)	Jim Bates (CA)
Ron Wyden (OR)	Bill Richardson (NM)
Gerry Sikorski (MN)	

With members on both the Ways and Means Health Subcommittee and the Energy and Commerce Health Subcommittee, Ohio is obviously an important state.

On the Senate side, the Finance Committee deals with (among other things), all legislation relating to health programs under the Social Security Act or financed by a trust fund, with a staff of over sixty

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aides. When the influential former chairman of Finance, Bob Dole, assumed the Majority Leader's position last month, Senator Bob Packwood of Oregon became the Committee's chairman. The Subcommittee on Health presently consists of seven (7) members:

Republicans	Democrats
Dave Durenberger (MN), Chairman	Max Baucus (MT)
Bob Packwood (OR)	Bill Bradley (NJ)
Bob Dole (KN)	George Mitchell (ME)
John Heinz (PA)	

The Senate Committee on Labor and Human Resources, chaired by Senator Orrin Hatch of Utah, has far-reaching jurisdiction over measures relating to education, labor, health and public welfare. Particularly, legislation concerning aging, public health concerns, biomedical research and development, and the handicapped all begin with this 16-member Committee in the Senate:

Republicans	Democrats
Orrin G. Hatch (UT) Chairman	Edward Kennedy (MA)
Robert T. Stafford (VT)	Claiborne Pell (RI)
Dan Quayle (IN)	Howard Metzenbaum (OH)
Don Nickles (OK)	Spark Matsunaga (HI)
Gordon Humphrey (NH)	Christopher Dodd (CT)
Lowell Weicker, Jr. (CT)	Paul Simon (IL)
Charles Grassley (IA)	John Kerry (MA)
Paula Hawkins (FL)	
Malcolm Wallop (WY)	

The information in this article can be a valuable tool to assist physicians in monitoring and affecting the actions of legislators, especially with regard to such important issues as physician reimbursement, medical education, and research funding. By making their views known to members of Congress who hold appointments on these strategic committees, physicians will be better able to effectuate the medical and health goals toward which they continue to strive. ■

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S. William Clark, Jr., M.D.
Immediate Past President
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Hemoccult Screening for Colorectal Carcinoma

Phillip L. Roberts, M.D.

Colorectal carcinoma is a common disease affecting approximately one in 20 individuals, with a mortality approximating 50%. The less advanced tumors have a better prognosis. It is projected that 60,000 individuals will die from this disease in the United States over the next 12 months. Patients who have tumors which are localized and diagnosed at an early stage have a survival of greater than 75%. These figures would suggest benefit from the screening of asymptomatic persons to detect early lesions. This certainly seems reasonable, and prudent physicians regularly screen for colorectal carcinoma when doing routine rectal examinations, stool Hemoccult tests, and proctosigmoidoscopies on asymptomatic individuals.

Bleeding from colorectal polyps and carcinoma is characteristically intermittent; for this reason, it is best to obtain specimens on 3 separate days.

When considering the screening of large numbers of asymptomatic individuals, the cost, risk-benefit relationships have to be examined more critically. There are presently two prospectively controlled series looking at the mortality rate from colon carcinoma in a group of individuals screened versus those not screened. The results of these studies will be very important and probably will answer the question over the next several years. If individuals found to have a disease by routine screening survive longer, it does not necessarily follow that the improved survival is due to early detection. When one diagnoses the disease early, by definition there will be a greater time to death even if no therapeutic intervention is undertaken (lead time bias). On the other hand, highly malignant cancer will be less likely to be discovered at a point in time during a screening survey. Therefore, the more indolent tumors will be discovered in relatively greater proportion and favorably influence the survival (length time bias). There is, nonetheless, strong but not conclusive evidence that early diagnosis improves survival. Patients in a large series who had tumors discovered by routine proctosigmoidoscopic examination had a survival of 90% at 15 years, approximating twice that expected when tumors are discovered as the result of symptoms. Further benefits of early screening include reduction in numbers of colon and rectal cancers following routine polypectomy at the time of endoscopic examination.

The best known test for early detection of blood in the stool is the Hemoccult II. This provides a test for two samples of stool from each specimen and is accompanied by positive and negative controls. The test consists of filter paper impregnated in guaiac. The addition of hydrogen-peroxide and the presence of peroxidase from blood causes oxidation of the guaiac to a blue color. Peroxidase is also found in fruit and fresh vegetables and can cause a false-positive test. The antioxidant effect of ascorbic acid interferes with the oxidation of guaiac and can result in a false-negative test. Iron preparations are reported to cause a false-positive test, the mechanism of which is not clear. If the stool specimen is rehydrated prior to testing, the sensitivity is markedly increased and dietary considerations are more important. It would be advisable in such circumstances to avoid red meat, fresh vegetables, and fruit for approximately 3 days before performing these tests. If the specimen is not rehydrated, the number of false-positives are reduced, and a restricted diet is not necessary. It is advisable to avoid vitamin C, iron and aspirin preparations.

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Prepared at the request of the Georgia Division, American Cancer Society. Others wishing to contribute papers to this Page are invited to send them to T. Gray Fountain, M.D., Cancer Page Editor, 910 N. Jefferson, Albany, GA 31708.

Bleeding from colorectal polyps and carcinoma is characteristically intermittent; for this reason, it is best to obtain specimens on 3 separate days. A single positive test is significant and should prompt evaluation for the source of blood loss. A retrospective analysis of one series revealed that if those individuals with only one positive of six specimens were excluded from evaluation, 41% of the neoplastic lesions would have been missed. Another technical consideration is storage time. Strongly positive tests will remain positive over a 30-day period. A weakly positive test may become negative at 4 days. The peroxidase present in the red cells is not stable; therefore, the test should ideally be performed within 4 days of collection. The Hemoccult test is less sensitive for upper GI bleeding. Peroxidase is inactivated by digestive enzymes, and a lager amount of bleeding is required to produce a positive test. The cost-benefit analysis would indicate that a positive test in an asymptomatic individual should initially direct attention to the colon for the source of bleeding.

How should one proceed in the evaluation of an asymptomatic individual who is found to have a positive Hemoccult test? It is not helpful to repeat the test. Colonoscopy is the most thorough way to examine the colon. If this is to be done, there is no reason to perform a proctosigmoidoscopic examination or a barium enema. If colonoscopy is not feasible for any of several reasons, flexible or rigid sigmoidoscopy, combined with air contrast barium enema should be done. Routine barium enema is not sufficient to reliably exclude polyps or small carcinomas. In general, the more colon examined, the more lesions will be found. Neoplastic lesions have been found in 20-40% asymptomatic persons with positive Hemoccult tests.

Of special interest are the results of one large prospectively controlled study. The control group was examined by sigmoidoscopy, and the test group had Hemoccult testing following sigmoidoscopy. Twenty-five percent of the lesions found at rigid sigmoidoscopic examination were missed by the Hemoccult test. At best, then, the test will miss 25% of lesions and probably closer to 50%. If the test is made more highly sensitive by rehydrating the samples, specificity will be lost, resulting in costly and potentially harmful testing of a larger number of disease-free individuals. Clearly, whatever the role of Hemoccult screening, the current tests leave something to be desired in both sensitivity and specificity. Experience to date with community screening programs, indicate an approximately 2% positive rate with a predictive value of 5% for carcinoma and 20% for polyps. The University of Minnesota has a prospectively controlled study of 10 years duration in which 45,000 subjects greater than 50 years of age were screened. Compliance in this highly motivated group was 75%. Positive tests were 1.8%, which increased to 3.5% when the slides were rehydrated. Over 100 cancers have been detected to date, with a predictive value of 8% for carcinoma and 29% for polyps. The older the participant, the higher the predictive rate for neoplasm. Of these

How should one proceed in the evaluation of an asymptomatic individual who is found to have a positive Hemoccult test?

carcinomas, 65% were Dukes A and 13% Dukes B Stage. The other controlled study was that from Sloan Kettering Memorial Cancer Center where 22,000 residents over age 40 were screened, all of whom initially had rigid proctosigmoidoscopic examination. One-half of them had subsequent Hemoccult screening and the other half served as the control. Compliance was 75%. Positive rate for unhydrated slides was 1% and for hydrated slides, 5.4%. The positive rate again increased with patient age. Positive tests were 12% predictive for carcinoma and 36% predictive for polyps. The predictive value for neoplastic lesions decreased from 48% to 19% when the slides were rehydrated. Most of the cancers found were early Dukes Stage. Of special interest is that 25% of the carcinomas and 75% of the benign polyps diagnosed by proctosigmoidoscopy were missed with the Hemoccult test.

The ability of Hemoccult screening to detect early colon neoplasms, the high incidence of these neoplasms, and the improved results of treatment of early lesions, suggest that screening programs designed to detect occult fecal blood may be beneficial. On the other hand, the high cost of evaluating persons with positive tests and the inherent risks, especially in the elderly, dictate caution in widespread use of this type of screening program. Until the results of prospectively controlled studies are available, the effect of these programs on survival from colon carcinoma will not be known. ■



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The American Heart Association-Georgia Affiliate Hypertension Education Network for Physicians

William McClellan, M.D., Sandra Owen, M.Ed.

HOUSEHOLD SURVEYS conducted in Georgia have found important changes in the epidemiology of hypertension in the state.[1] The numbers of hypertensive Georgians with detected, treated, and controlled hypertension have increased. While this is encouraging, it would be premature to conclude that current hypertension control in Georgia is optimal. Some population groups, particularly young males, lag behind in terms of hypertension detection and control. Further, substantial proportions of aware hypertensives have been found to be non-adherent to follow-up and at high risk of having poorly controlled hypertension.

A goal of the 1981 Physician Hypertension Practice Survey was to identify means of providing effective continuing medical education concerning hypertension.

Efforts to improve the control of hypertension in Georgia rely heavily on the physician. During the last decade, physician education programs have been conducted throughout the state to keep physicians abreast of evolving concepts in the management of hypertension. A recently conducted survey by the American Heart Association-Georgia Affiliate has shown that these programs appear to have been successful. Most physicians in Georgia currently use appropriate diagnostic and therapeutic protocols in their care of hypertensive patients.[2] There remains, however, a need to employ techniques to ensure follow up of hypertensive patients and to use specific strategies to enhance adherence to therapy. Improvement in these practices would impact substantially on the remaining burden of uncontrolled hypertension in Georgia.

A goal of the 1981 Physician Hypertension Practice Survey was to identify means of providing effective continuing medical education (CME) concerning hypertension. This paper will present the findings of the survey which bear upon the design and distribution of CME programs about hypertension to Georgia physicians. This survey led to the development and implementation of a new physician education network which is now providing Georgia physicians with up-to-date information about the care of the hypertensive patient.

Survey Methods

During the period of July-September, 1981, a survey of hypertension practice was mailed to a 50% sample of physicians listed by the Georgia State Board of Medical Licensure as practicing general practice, family practice, internal medicine, pediatrics, and cardiology. Physician practice addresses were stratified into two groups, metropolitan (SMSA) or non-metropolitan (non-SMSA), according to the 1970 census. Half of each practice group in each stratum was selected (using alternate names from an alphabetical listing) for our survey. The characteristics of the responding physicians and their reported hypertension practices have been previously described.[2] A survey completion rate of 63%, adjusted for retired, deceased, and incarcerated

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physicians, those who had left the state, and duplications, was obtained.

In addition to questions about hypertension practice, the survey included questions concerning the sources of information and continuing education about hypertension used by the physician. Further, physicians were asked about the effectiveness of various methods of continuing education as sources of new information about the control of hypertension and how likely they would be to attend various types of meetings concerning hypertension.

Survey Results

Physician sources of information about hypertension were ascertained by asking, "we are interested in your sources of information and continuing education about hypertension. How frequently do you discuss or read about hypertension or HBP drugs with the following?" (Table 1). Journals were the most frequently cited source of information about hypertension (64.3% of physicians). Drug detail men and colleagues were also relatively frequent sources, while medical society meetings and courses away from the hospital were infrequent sources for hypertension CME.

Physicians' perceptions of the effectiveness of various means of conducting CME programs were assessed by asking, "How effective would the following methods be in delivering to you presumably new information about the control of hypertension?" (Table 2). Choices were limited to options available for use. These choices included an annual state meeting for continuing medical education, possible regional meetings throughout the states, a physician phone consultation service, and an office newsletter. None of the alternatives were considered extremely effective by a majority of physicians. Newsletters were felt to be extremely effective by only 38.4% of physicians, followed by consultations (23.6%), annual meetings (15.7%), and regional meetings (14%). The same ranking persisted when the "extremely effective" and "usually effective" categories were combined.

The emphasis of the educational modules is on the practical application of established techniques which can improve the care of the hypertensive patient. The programs are presented at community hospitals to minimize barriers to attendance and maximize participation.

Table 1 — Physician Survey of Hypertension Practice, Sources of Information, Georgia, July-September, 1981

QUESTION: We are interested in your sources of information and continuing education about hypertension. How frequently do you discuss with or learn about hypertension or HBP drugs with the following?

Information Source	*Frequently*	*Some*	*Little*	*None*
Journals	64.3	27.7	7.4	.6
Colleagues	28.9	46.7	18.7	5.6
Drug Detail Men	39.5	25.7	21.8	12.9
Medical Society Meetings	18.4	40.2	24.0	17.4
Courses on Hypertension	16.4	33.8	23.9	25.9

Table 2 — Physician Survey of Hypertension Practice, Type of CME Activity, Georgia, July-September, 1981

QUESTION: How effective would the following methods be in delivering to you, presumably new information about the control of hypertension?

Type of CME Activity	*Extremely Effective*	*Usually*	*Occasionally*	*Not at all*
Annual scientific meeting American Heart Association Georgia Affiliate	15.7	34.6	29.0	20.7
Regional meetings throughout the state on hypertension	14.0	34.0	33.7	18.2
Newsletter on hypertension sent to your office	38.4	36.3	15.2	10.1
Physician resource list for phone courtesy consultation and difficult hypertensive problems	23.6	29.6	27.1	19.0

The likelihood of attendance to CME programs on hypertension practice was ascertained by asking, "How likely would you or your staff be to attend a medical staff meeting about hypertension at their hospital?" Regional hypertension meetings were not likely to be well attended, with only 16% of respondents very likely to attend. In contrast, 55% of responding physicians were very likely to attend a medical staff meeting concerning hypertension in their hospital.

This survey led to the development and implementation of a new physician education network which is now providing Georgia physicians with up-to-date information about the care of the hypertensive patient.

Development of a Professional Education Network

The survey results reflect a preference for hospital-based CME programs. In contrast, statewide and regional meeting formats were felt to be ineffective. This orientation toward educational activities for the physician in his or her community is further emphasized by the expected effectiveness of a hypertension newsletter sent to the physician's office. This is in contrast to the low effectiveness for hypertension CME reported for regional and state meetings as well as the state medical journal. Interest in the community hospital as a place for continuing medical education activity is consistent with the findings of previous surveys.[3-4] Wingate and Wingate found a clear preference for a hospital-based format among physicians in Northwestern New York.[3] These physicians expressed a strong interest in didactic lectures, with both clinical and basic science content delivered in a local setting. The practicality of this format has been demonstrated by a program conducted for physicians in Colorado and Wyoming to improve emergency care.[4]

To satisfy the need for hospital-based education programs, the Georgia Affiliate developed two educational modules which can be used in community hospitals. The modules consist of a slide-tape presentation of a topic pertinent to the care of the hypertensive patient. Each module was prepared by a committee of physicians and allied health professionals assisted by Affiliate Staff. After defining a topic for presentation, the appropriate literature was reviewed and a script written. Illustrations were then combined with the script.

The first module, "Follow-up of the Hypertensive Patient," was field tested in 30 urban and rural hospitals. Physician volunteers in these hospitals agreed to sponsor the program, introduce the topic, and administer evaluation forms. The module was distributed to these physicians by Heart Association Field Staff. The results of the field testing suggested that the module approach was acceptable to physicians in the community hospital. A majority of physicians responding to the evaluation form stated that the program was useful or very useful (88.2%). Only 11.8% felt the program to not be very useful.

The distribution of the physician education module has been achieved through an education network similar to that used in field testing. Local Heart Association volunteer physicians were asked to serve as liaison between Affiliate field staff and community physicians. To date, the network created by these activities has reached over 400 physicians. Family practice physicians are the largest group of attendees, 41% of the total. Program evaluation by physicians shows the material presented to be useful and practical (71%), and the method of presentation effective (71%). The first module was rated excellent by 25% of the attendees and good by the remaining 75%. Perhaps the most important result was that

Table 3 — Physician Survey of Hypertension Practice, Type of Meeting, Georgia, July-September, 1981

QUESTION: How likely would you or your staff be to attend the following types of meetings about hypertension?

	Percentage of Physicians Answering			
Type of Meeting	*Very Likely*	*Somewhat Likely*	*Not Likely*	*Would Not Attend*
Regional hypertension meeting in your part of the state (281.6)	16.0	40.5	26.3	17.2
Medical Staff meeting in your hospital (325.9)	55.3	25.4	9.2	10.1

physicians attending the program said they were very likely to adopt practices mentioned in the module. For example, 46% of physician attendees said they would institute an appointment reminder system, 38% said they would begin using a tracking system.

The difficulty of designing interventions and implementing physician education programs which succeed in reaching their intended audience with information that leads to improved patient care is now well known.[5] The Georgia Affiliate's physician education network is an attempt to address many of these difficulties. The content of the modules is based on the analysis of actual physician hypertension practice and health care needs in the population. The emphasis of the modules is on the practical application of established techniques which can improve the care of the hypertensive patient. The programs are presented at community hospitals to minimize barriers to attendance and maximize the likelihood of participation. The use of self-contained modules and physician volunteers minimizes cost, a key consideration in a continuing education program. The ultimate utility of this, or any CME effort, however, must rest on improvements in health care delivery and patient outcome.

The initial success of the program has been encouraging. The second module prepared by the Hypertension Committee of Georgia Affiliates on "Non-pharmacologic treatment of high blood pressure" is available for distribution. A third module, to deal with smoking cessation in the hypertensive patient, is to follow, and other topics, many suggested by program participants, are currently being considered for future programs.

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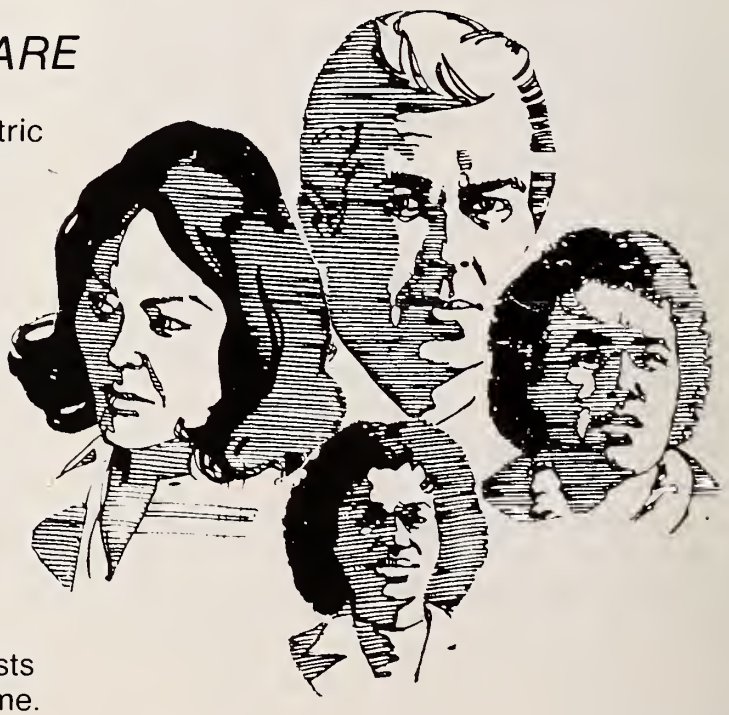
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Contraindications: Concomitant use with other potassium-sparing agents such as spironolactone or amiloride. Further use in anuria, progressive renal or hepatic dysfunction, hyperkalemia. Pre-existing elevated serum potassium. Hypersensitivity to either component or other sulfonamide-derived drugs.

Warnings: Do not use potassium supplements, dietary or otherwise, unless hypokalemia develops or dietary intake of potassium is markedly impaired. If supplementary potassium is needed, potassium tablets should not be used. Hyperkalemia can occur, and has been associated with cardiac irregularities. It is more likely in the severely ill, with urine volume less than one liter/day, the elderly and diabetics with suspected or confirmed renal insufficiency. Periodically, serum K^+ levels should be determined. If hyperkalemia develops, substitute a thiazide alone, restrict K^+ intake. **Associated widened QRS complex or arrhythmia requires prompt additional therapy.** Thiazides cross the placental barrier and appear in cord blood. Use in pregnancy requires weighing anticipated benefits against possible hazards, including fetal or neonatal jaundice, thrombocytopenia, other adverse reactions seen in adults. Thiazides appear and triamterene may appear in breast milk. If their use is essential, the patient should stop nursing. Adequate information on use in children is not available. Sensitivity reactions may occur in patients with or without a history of allergy or bronchial asthma. Possible exacerbation or activation of systemic lupus erythematosus has been reported with thiazide diuretics.

Precautions: The bioavailability of the hydrochlorothiazide component of 'Dyazide' is about 50% of the bioavailability of the single entity. Theoretically, a patient transferred from the single entities of Dyrenium (triamterene, SK&F CO.) and hydrochlorothiazide may show an increase in blood pressure or fluid retention. Similarly, it is also possible that the lesser hydrochlorothiazide bioavailability could lead to increased serum potassium levels. However, extensive clinical experience with 'Dyazide' suggests that these conditions have not been commonly observed in clinical practice. Do periodic serum electrolyte determinations (particularly important in patients vomiting excessively or receiving parenteral fluids, and during concurrent use with amphotericin B or corticosteroids or corticotropin [ACTH]). Periodic BUN and serum creatinine determinations should be made, especially in the elderly, diabetics or those with suspected or confirmed renal insufficiency. Cumulative effects of the drug may develop in patients with impaired renal function. Thiazides should be used with caution in patients with impaired hepatic function. They can precipitate coma in patients with severe liver disease. Observe regularly for possible blood dyscrasias, liver damage, other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving triamterene, and leukopenia, thrombocytopenia, agranulocytosis, and aplastic and hemolytic anemia have been reported with thiazides. Thiazides may cause manifestation of latent diabetes mellitus. The effects of oral anticoagulants may be decreased when used concurrently with hydrochlorothiazide; dosage adjustments may be necessary. Clinically insignificant reductions in arterial responsiveness to norepinephrine have been reported. Thiazides have also been shown to increase the paralyzing effect of nondepolarizing muscle relaxants such as tubocurarine. Triamterene is a weak folic acid antagonist. Do periodic blood studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in post-sympathectomy patients. Use cautiously in surgical patients. Triamterene has been found in renal stones in association with the other usual calculus components. Therefore, 'Dyazide' should be used with caution in patients with histories of stone formation. A few occurrences of acute renal failure have been reported in patients on 'Dyazide' when treated with indomethacin. Therefore, caution is advised in administering nonsteroidal anti-inflammatory agents with 'Dyazide'. The following may occur: transient elevated BUN or creatinine or both, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), hyperuricemia and gout, digitalis intoxication (in hypokalemia), decreasing alkali reserve with possible metabolic acidosis. 'Dyazide' interferes with fluorescent measurement of quinidine. Hypokalemia is uncommon with 'Dyazide', but should it develop, corrective measures should be taken such as potassium supplementation or increased dietary intake of potassium-rich foods. Corrective measures should be instituted cautiously and serum potassium levels determined. Discontinue corrective measures and 'Dyazide' should laboratory values reveal elevated serum potassium. Chloride deficit may occur as well as dilutional hyponatremia. Concurrent use with chlorpropamide may increase the risk of severe hyponatremia. Serum PBI levels may decrease without signs of thyroid disturbance. Calcium excretion is decreased by thiazides. 'Dyazide' should be withdrawn before conducting tests for parathyroid function.

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Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis, rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting, diarrhea, constipation, other gastrointestinal disturbances; postural hypotension (may be aggravated by alcohol, barbiturates, or narcotics). Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and respiratory distress including pneumonitis and pulmonary edema, transient blurred vision, sialadenitis, and vertigo have occurred with thiazides alone. Triamterene has been found in renal stones in association with other usual calculus components. Rare incidents of acute interstitial nephritis have been reported. Impotence has been reported in a few patients on 'Dyazide', although a causal relationship has not been established.

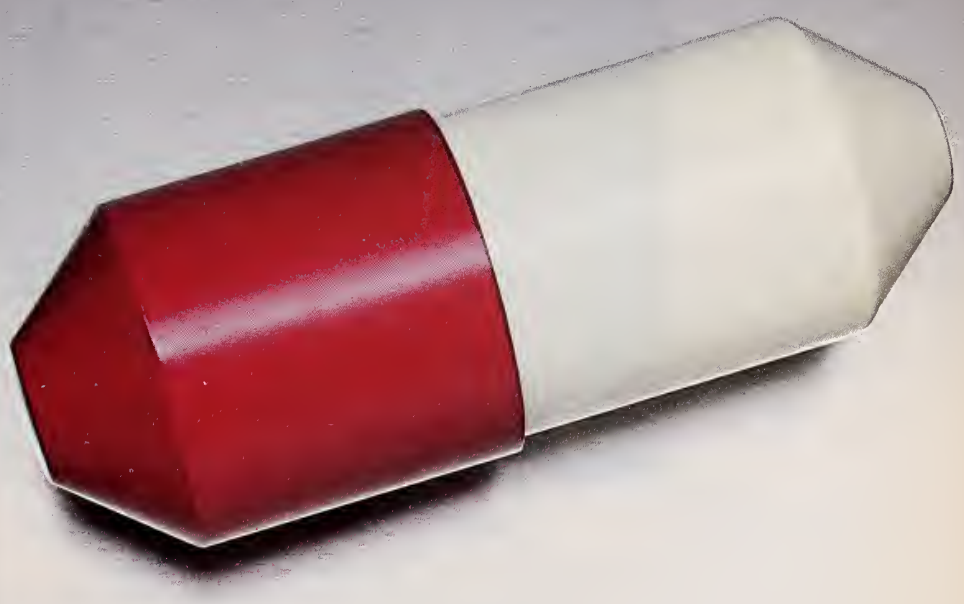
Supplied: 'Dyazide' is supplied as a red and white capsule, in bottles of 1000 capsules; Single Unit Packages (unit-dose) of 100 (intended for institutional use only); in Patient-Pak™ unit-of-use bottles of 100.

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PERSONALS

Fourth District

Edwin J. Galler, M.D., of Stone Mountain, was recently elected Secretary of the South Atlantic Chapter of the American College of Utilization Review Physicians. Dr. Galler is a Clinical Instructor of Internal Medicine at Emory University School of Medicine and also maintains a private practice in Decatur. Since 1983, he has been serving as Chief Physician Advisor for the Utilization Review Committee and DRG Physician Coordinator at DeKalb General Hospital.

Fifth District

Atlanta internist, **Harold S. Ramos, M.D.,** was appointed Medical Director of the Crawford W. Long Memorial Hospital of Emory University. He has been acting Medical Director. A native of Atlanta, Dr. Ramos completed his undergraduate work at John Hopkins University and received his medical degree from the Medical College of Georgia. He completed his medical internship at Walter Reed Army Hospital. A member of the American Board of Internists, he is a Professor of Medicine at the Emory University School of Medicine.

Seventh District

After 36 years of medical practice in Dalton, **Albert M. Boozer, M.D.,** retired July 1. Dr. Boozer graduated magna cum laude from Newberry College in South Carolina. He received his medical degree from the University of Tennessee and performed his residency at Denver General Hospital. During his career, Dr. Boozer has served as president of the Whitfield-Murray Medical Society, president of the Seventh District Medical Society, as doctor for the Dolphin Swim Team and the Dalton High School Band.

Tenth District

George W. Thurmond, M.D., otolaryngologist from Augusta, has been named chief of staff at St. Joseph Hospital. Dr. Thurmond's 1-year term began July 1. He is a graduate of Tulane Medical School and has been on the staff of St. Joseph since 1970.

Shajih L. Muhanna, M.D., a vascular surgeon from Riverdale, was elected an active member of the Atlanta Vascular Society on June 19.

SPECIALTY SOCIETIES

The **Georgia Neurological Society** elected the following officers for 1985-86: President, Donald Bickers, M.D., Augusta; President-Elect, Freemont P. Wirth, M.D., Savannah; Secretary Treasurer, J. Paul Ferguson, M.D., Rome.

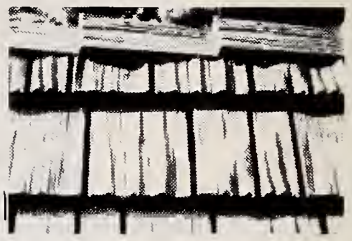
DEATHS

James D. Lawrence, Sr.

James D. Lawrence, Sr., of Macon, died May 24th. Dr. Lawrence worked with the staff of the Monroe County Hospital for many years and maintained an office in Forsyth.

Survivors include his wife, two sons, one daughter, three step-children, his mother, and one brother.

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CSBME Disciplinary Actions

The following information is reprinted in part from the January, 1985, newsletter of the Composite State Board of Medical Examiners (CSBME) (the Board) of Georgia:

This is a report of disciplinary actions with effective dates between July 1, 1984, and December 31, 1984. Although every effort is made to ensure the information is correct, you should check with the Board to assure accuracy. The Board typically includes several provisions in an Order which are not summarized here. You are advised that you should not take any adverse action against a physician based on the report; you should request a copy of the public order from the Board, and evaluate that document before making any decisions affecting any of these physicians. This listing does not reflect pending appeals.

James O. Bailes, M.D., of Dallas, Texas, signed a Voluntary Surrender of his medical license effective September 6, 1984. This surrender shall have the same effect as a revocation.

Agostino Carlucci, M.D., of Atlanta, had his license revoked effective November 29, 1984.

Winifred M. Chambers, M.D., of Miami, Florida, signed a Voluntary Surrender of her medical license effective September 11, 1984. This surrender shall have the same effect as a revocation.

William S. Corley, M.D., Forest Park, signed a Consent Order effective December 5, 1984, to suspend his license for 3 years. He surrendered his DEA permit as of January 5, 1985.

H. O. Eason, Jr., M.D., of Marietta, signed a Consent Order effective December 20, 1984, to suspend his license for 2 years.

W. D. Hall, M.D., of Calhoun, signed a Consent Order effective December 5, 1984. His license is voluntarily suspended; he surrendered his DEA permit before January 5, 1985.

Sharon M. Hinkson, M.D., Columbus, signed a Consent Order which provides that her license be suspended for 2 years, beginning August 9, 1984.

Julius Johnson, M.D., Augusta, signed a Consent Order effective August 9, 1984.

Teodulo M. Llorente, M.D., of Rome, signed a Consent Order effective August 9, 1984, suspending his license for 2 years.

Francisco M. Macias, M.D., of Hampton, signed a Consent Order suspending his license for 1 year, effective October 4, 1984, but said suspension shall be stayed, and he shall be placed on probation.

Albert F. Morgenthaler, D.O., Atlanta, had his license revoked for 1 year and shall subsequently be placed on probation for 2 years, effective July 10, 1984.

James W. Purcell, M.D., of Covington, signed a Consent Order on August 27, 1984.

Rafael G. Razuri, M.D., of Savannah, has had his license placed on probation for 5 years, effective August 16, 1984. His license has also been the subject of action by the South Carolina Board of Medical Examiners.

Manuel A. Rebuelta Rodriquez, M.D., of Stockbridge, has had his license placed on probation effective October 4, 1984, subject to terms and conditions in the Board's order.

William R. Rundles, M.D., of Jacksonville, Florida, has had his license suspended in Georgia for 1 year and will remain on probation for 3 years.

Gilberto Vila-Balzac, M.D., Atlanta, has had his license suspended for 3 years and will subsequently be placed on probation for 3 years.

Virgil C. Wade, M.D., Atlanta, signed a Consent Order effective September 6, 1984. His license will stand voluntarily suspended.

William T. Ward, M.D., Atlanta, had emergency suspension of his license effective December 7, 1984.

Richard Weaver, M.D., Vidalia, had his license suspended as of July 13, 1984.

Jerry L. Worthy, M.D., Dallas, Georgia, signed a Consent Order to suspend his license for 2 years effective August 9, 1984, provided that all but 30 days of said suspension shall be stayed so long as he abides by conditions of probation.

Homer P. Wood, M.D., Ft. Gaines, signed a Consent Order suspending his license for 1 year, provided that all but 30 days shall be stayed. After the 1-year suspension, his license shall be placed on an additional probation period of 5 years.

J. Hoyt Young, M.D., Atlanta, voluntarily surrendered his license; such surrender shall have the same effect as a revocation. ■

Memories

THERE ARE MANY medical students who went through medical school without anything *really* happening to them. We attended classes and plodded through the sciences and the many labs. We did our best to be avoided or not called upon during those 4 memorable years. Well, I've been lucky enough to have re-experienced a "happening" to me some 27 years later. Memory of these events are sharper and clearer now than what I had for breakfast yesterday.

I was an older first year medical student, arriving at Emory in Atlanta at the grand old age of 28. I was one of the oldest in the class, supposedly wise to the ways of life. In our first year, we were quickly caught up in anatomy, histology, and the other brutal basic sciences, and one professor loomed larger than another. They were trying days and testing days. Everybody in our class was pecking for position and recognition. Mel got it, Mahlon got it, Tommy got it, but I sure didn't. I crammed and stuffed; it was so hard to remember those facts upon facts.

We were well into the second months of this first year when I was invited to a medical fraternity dinner. These affairs were held to look us over and see if we fit the mold or whatever. Seated beside me at this special dinner was another older sophomore medical student, named Phil, who felt he had to be kind and introduce me to the others. He himself was no spring chicken. He was a physiologist Ph.D. who later turned to medicine and eventually to internal medicine and cardiology. He was nice to me at the dinner. There was this tall, handsome young man sat across from me. He smiled a lot, his smile struck me as so sincere and warm. He talked easily, quietly, and confidently.

"Marvyn," Phil said, "I want you to meet Dr. Hurst. He's the Chairman of the Department of Medicine at our school."

"Nice to meet you Dr. Hurst," and I added so confidently, "Phil, he can't be the head of the department, he may be the Chief Resident, but definitely not the chairman."

A swift kick to my shins under the table did not stop my loose tongue, I continued, "Phil, how in the hell can he be a chairman and he's our age? I'll be a monkey's uncle, if he's chairman!"

Another kick and this time it hurt, so I stopped talking. All the while, Dr. J. Willis Hurst sat quietly and smiled. He looked at me as intently as an FBI man studies the most wanted list. He said nothing more about himself. The rest of the meal was filled with enjoyable dinner conversation. At the end of the meal the president of the fraternity announced the honored guests. You are right . . . Dr. J. W. Hurst *was* the most honored guest!

After the introduction he stood up and looked straight down at me and said . . . "Thank you so much for the compliment of being a Chief Resident, Marvyn, but I guess I really am the chairman." He was, and is, and in my book will always be.

He took a keen interest in my medical training for the next 4 years and when the opportunity arose with our class, he would *always* call on me, because he *remembered* my name. This relationship flowered in medical school for 4 years. If there ever was an Oslerian-type doctor to pattern after it was Dr. J. W. Hurst.

I graduated and went out of Atlanta for internship and residency. Subsequently in medical practice for 18 years, I did not have the occasion to see him until last week. My brother-in-law went to Emory for coronary by-pass surgery. Who was his cardiologist? Yes, it was Dr. J. W. Hurst. I traveled to my alma mater to see my brother-in-law, and there was Dr. Hurst. He was a little older, heavier, but certainly carried himself in the same Oslerian manner. It was so nice to see him, surrounded by fellows, residents, and students. Seeing and talking to him brought back this memory of medical school and one of the most unforgettable characters I ever met. It was a part of my life I will always cherish. It's not just anybody that can go to a medical school and be on a first name basis with a medical giant like Dr. J. W. Hurst. It was nice remembering the good old days for a while.

Incidentally my brother-in-law did very well under his care.

Marvyn D. Cohen, M.D.
Pediatrics and Allergy
Columbus

Georgia Medical Students Attend AMA Meeting in Chicago



Georgia's medical schools were well represented at the 1985 annual meeting of the American Medical Association Medical Student Section (AMA-MSS) last June. High points of the meeting included recognition of two Georgia medical students for their participation in the AMA-MSS Outreach Program.

Georgia's medical schools were well represented at the Annual 1985 meeting of the American Medical Association Medical Student Section (AMA-MSS) June 14-16, 1985. All four schools were represented with a total of 10 students. Those attending include, from Emory University Medical School, Jeet Sandhu, Delegate, and Carolyn Hart, Alternate Delegate; from the Medical College of Georgia, Aaron Davidson, Delegate and Vice-Chairperson MAG-MSS, David Starr, Alternate Delegate, and Becky Bedingfield, Chapter Secretary; from Mercer University Medical School, Earl Mullis, Delegate and MAG-MSS Chairperson, and Hal Bivins, Alternate Delegate; and from Morehouse Medical School, Leon Dent, AMA-MSS Delegate to the AMA House of Delegates, Georges Maliha, Delegate, and Steve Dawkins, Alternate Delegate and MAG-MSS Secretary.

High points of the meeting included recognition of two Georgia medical students for their participation in the AMA-MSS Outreach Program. This program began after the Interim 1984 meeting in Honolulu, and its purpose was to increase student membership. Those recognized from Georgia include Kimberly Elliot, of Mercer, who recruited six new members and received daily expenses for an AMA-MSS meeting, and Aaron Davidson of Medical College of Georgia, who recruited 69 new members and received full funding from the AMA for both the Annual and Interim 1985 meetings. Also, two resolutions from the Georgia Delegation passed the Assembly. The first concerned the addition of sulfite to restaurant foods, and the second dealt with smokeless tobacco. Georgia students with committee appointments included Georges Maliha, Chairman of Reference Committee B, and Aaron Davidson, Credentials Committee.

Other topics covered in the AMA-MSS Assembly included: Distribution of *AMA Drug Evaluations,* Good Samaritan Laws, Airlines, Tobacco Product Liability, Impact of Medicare Funding on Medical School Education, and many other topics.

After the close of the AMA-MSS meeting on Sunday, the students met with the Georgia Delegation (MAG) to hear discussion of business before the AMA House of Delegates. Following this discussion over lunch, several medical students went with the Georgia Delegation for the opening session of the AMA House of Delegates.

On behalf of the other students, I would like to thank the members and staff of MAG for their continued support of the Medical Student Section. Also, a special thanks goes to the spouses of the members present whose warmth helped the students feel at home. Again, many thanks.

Aaron Davidson
MCG Delegate
Vice-Chairperson MAG-MSS

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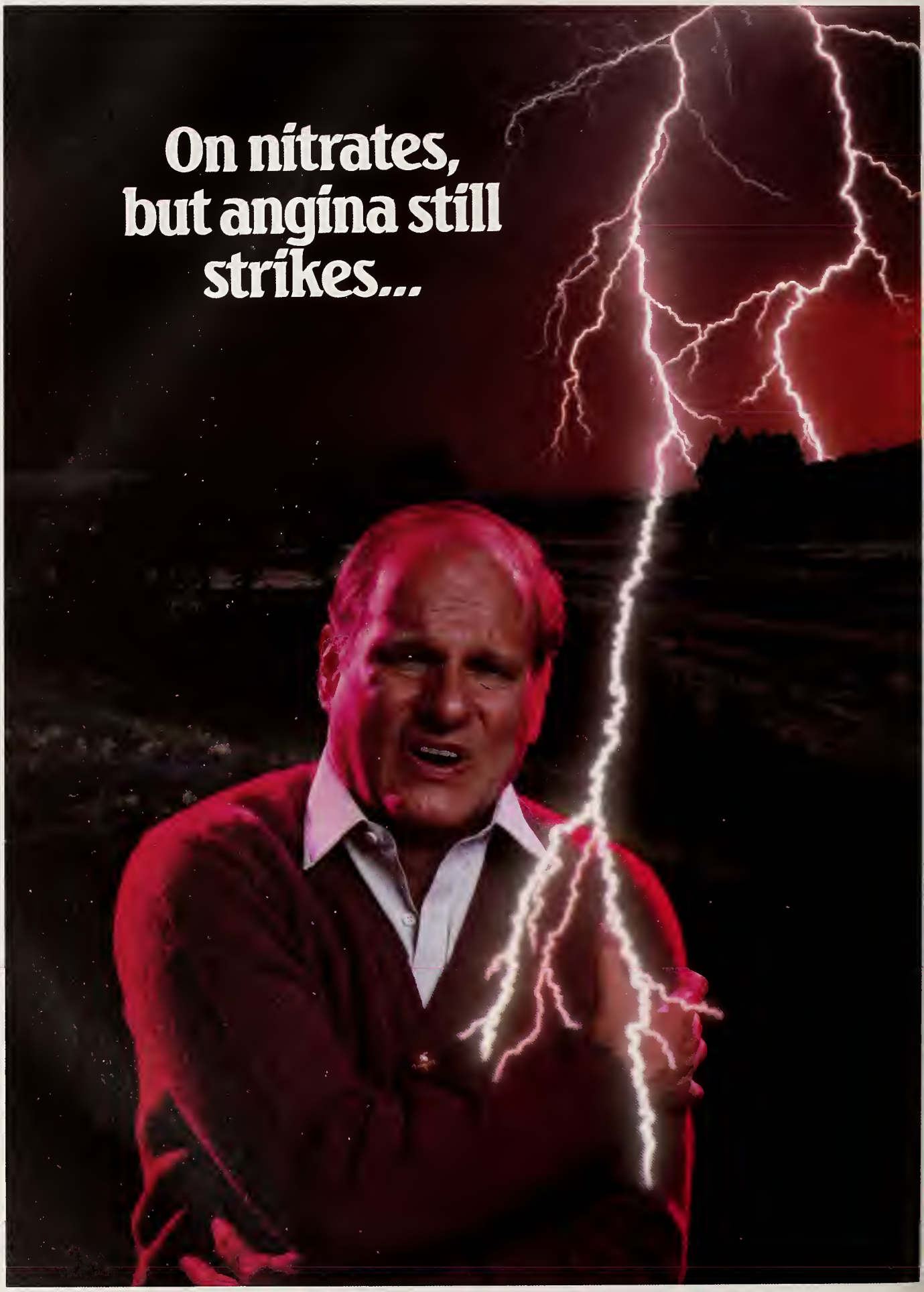
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Contraindications: Severe left ventricular dysfunction (see *Warnings),* hypotension (systolic pressure < 90 mm Hg) or cardiogenic shock, sick sinus syndrome (except in patients with a functioning artificial ventricular pacemaker), 2nd- or 3rd-degree AV block. **Warnings:** ISOPTIN should be avoided in patients with severe left ventricular dysfunction (e.g., ejection fraction < 30% or moderate to severe symptoms of cardiac failure) and in patients with any degree of ventricular dysfunction if they are receiving a beta blocker. (See *Precautions.)* Patients with milder ventricular dysfunction should, if possible, be controlled with optimum doses of digitalis and/or diuretics before ISOPTIN is used. (Note interactions with digoxin under *Precautions.*) ISOPTIN may occasionally produce hypotension (usually asymptomatic, orthostatic, mild and controlled by decrease in ISOPTIN dose). Elevations of transaminases with and without concomitant elevations in alkaline phosphatase and bilirubin have been reported. Such elevations may disappear even with continued treatment; however, four cases of hepatocellular injury by verapamil have been proven by rechallenge. Periodic monitoring of liver function is prudent during verapamil therapy. Patients with atrial flutter or fibrillation and an accessory AV pathway (e.g. W-P-W or L-G-L syndromes) may develop increased antegrade conduction across the aberrant pathway bypassing the AV node, producing a very rapid ventricular response after receiving ISOPTIN (or digitalis). Treatment is usually D.C.-cardioversion, which has been used safely and effectively after ISOPTIN. Because of verapamil's effect on AV conduction and the SA node, 1° AV block and transient bradycardia may occur. High grade block, however, has been infrequently observed. Marked 1° or progressive 2° or 3° AV block requires a dosage reduction or, rarely, discontinuation and institution of appropriate therapy depending upon the clinical situation. Patients with hypertrophic cardiomyopathy (IHSS) received verapamil in doses up to 720 mg/day. It must be appreciated that this group of patients had a serious disease with a high mortality rate and that most were refractory or intolerant to propranolol. A variety of serious adverse effects were seen in this group of patients including sinus bradycardia, 2° AV block, sinus arrest, pulmonary edema and/or severe hypotension. Most adverse effects responded well to dose reduction and only rarely was verapamil discontinued. **Precautions:** ISOPTIN should be given cautiously to patients with impaired hepatic function (in severe dysfunction use about 30% of the normal dose) or impaired renal function, and patients should be monitored for abnormal prolongation of the PR interval or other signs of excessive pharmacologic effects. Studies in a small number of patients suggest that concomitant use of ISOPTIN and beta blockers may be beneficial in patients with chronic stable angina. Combined therapy can also have adverse effects on cardiac function. Therefore, until further studies are completed, ISOPTIN should be used alone, if possible. If combined therapy is used, close surveillance of vital signs and clinical status should be carried out. Combined therapy with ISOPTIN and propranolol should usually be avoided in patients with AV conduction abnormalities and/or depressed left ventricular function. Chronic ISOPTIN treatment increases serum digoxin levels by 50% to 70% during the first week of therapy, which can result in digitalis toxicity. The digoxin dose should be reduced when ISOPTIN is given, and the patients should be carefully monitored to avoid over- or under-digitalization. ISOPTIN may have an additive effect on lowering blood pressure in patients receiving oral antihypertensive agents. Disopyramide should not be given within 48 hours before or 24 hours after ISOPTIN administration. Until further data are obtained, combined ISOPTIN and quinidine therapy in patients with hypertrophic cardiomyopathy should probably be avoided, since significant hypotension may result. Clinical experience with the concomitant use of ISOPTIN and short- and long-acting nitrates suggest beneficial interaction without undesirable drug interactions. Adequate animal carcinogenicity studies have not been performed. One study in rats did not suggest a tumorigenic potential, and verapamil was not mutagenic in the Ames test. *Pregnancy Category C*: There are no adequate and well-controlled studies in pregnant women. This drug should be used during pregnancy, labor and delivery only if clearly needed. It is not known whether verapamil is excreted in breast milk; therefore, nursing should be discontinued during ISOPTIN use. **Adverse Reactions:** Hypotension (2.9%), peripheral edema (1.7%), AV block: 3rd degree (0.8%), bradycardia: HR < 50/min (1.1%), CHF or pulmonary edema (0.9%), dizziness (3.6%), headache (1.8%), fatigue (1.1%), constipation (6.3%), nausea (1.6%), elevations of liver enzymes have been reported. (See *Warnings.*) The following reactions, reported in less than 0.5%, occurred under circumstances where a causal relationship is not certain: ecchymosis, bruising, gynecomastia, psychotic symptoms, confusion, paresthesia, insomnia, somnolence, equilibrium disorder, blurred vision, syncope, muscle cramp, shakiness, claudication, hair loss, macules, spotty menstruation. **How Supplied:** ISOPTIN (verapamil HCl) is supplied in round, scored, film-coated tablets containing either 80 mg or 120 mg of verapamil hydrochloride and embossed with "ISOPTIN 80" or "ISOPTIN 120" on one side and with "KNOLL" on the reverse side. Revised August, 1984. 2385

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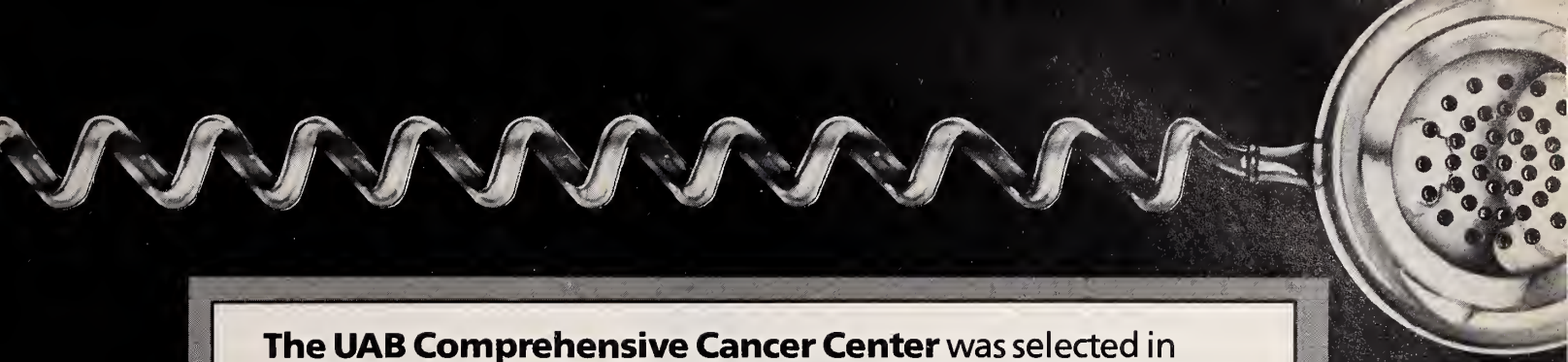
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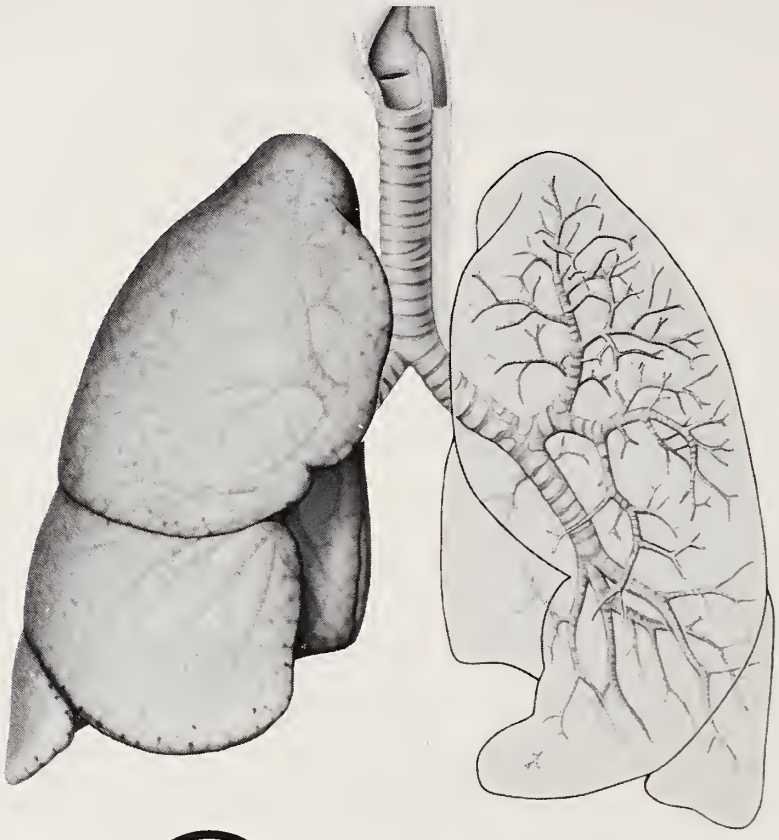
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Brief Summary: Consult the package literature for prescribing information.

Indications and Usage: Ceclor* (cefaclor, Lilly) is indicated in the treatment of the following infections when caused by susceptible strains of the designated microorganisms:

Lower respiratory infections, including pneumonia caused by *Streptococcus pneumoniae (Diplococcus pneumoniae), Haemophilus influenzae*, and *S. pyogenes* (group A beta-hemolytic streptococci)

Appropriate culture and susceptibility studies should be performed to determine susceptibility of the causative organism to Ceclor.

Contraindication: Ceclor is contraindicated in patients with known allergy to the cephalosporin group of antibiotics.

Warnings: IN PENICILLIN-SENSITIVE PATIENTS, CEPHALOSPORIN ANTIBIOTICS SHOULD BE ADMINISTERED CAUTIOUSLY THERE IS CLINICAL AND LABORATORY EVIDENCE OF PARTIAL CROSS-ALLERGENICITY OF THE PENICILLINS AND THE CEPHALOSPORINS, AND THERE ARE INSTANCES IN WHICH PATIENTS HAVE HAD REACTIONS, INCLUDING ANAPHYLAXIS, TO BOTH DRUG CLASSES.

Antibiotics, including Ceclor, should be administered cautiously to any patient who has demonstrated some form of allergy, particularly to drugs.

Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics (including macrolides, semisynthetic penicillins, and cephalosporins); therefore, it is important to consider its diagnosis in patients who develop diarrhea in association with the use of antibiotics. Such colitis may range in severity from mild to life-threatening.

Treatment with broad-spectrum antibiotics alters the normal flora of the colon and may permit overgrowth of clostridia. Studies indicate that a toxin produced by *Clostridium difficile* is one primary cause of antibiotic-associated colitis.

Mild cases of pseudomembranous colitis usually respond to drug discontinuance alone. In moderate to severe cases, management should include sigmoidoscopy, appropriate bacteriologic studies, and fluid, electrolyte, and protein supplementation. When the colitis does not improve after the drug has been discontinued, or when it is severe, oral vancomycin is the drug of choice for antibiotic-associated pseudomembranous colitis produced by *C. difficile*. Other causes of colitis should be ruled out.

Precautions: *General Precautions* — If an allergic reaction to Ceclor* (cefaclor, Lilly) occurs, the drug should be discontinued and, if necessary, the patient should be treated with appropriate agents, e.g., pressor amines, antihistamines, or corticosteroids.

Prolonged use of Ceclor may result in the overgrowth of nonsusceptible organisms. Careful observation of the patient is essential. If superinfection occurs during therapy, appropriate measures should be taken.

Positive direct Coombs' tests have been reported during treatment with the cephalosporin antibiotics. In hematologic studies or in transfusion cross-matching procedures when antiglobulin tests are performed on the minor side or in Coombs' testing of newborns whose mothers have received cephalosporin antibiotics before parturition, it should be recognized that a positive Coombs' test may be due to the drug.

Ceclor should be administered with caution in the presence of markedly impaired renal function. Under such conditions, careful clinical observation and laboratory studies should be made because safe dosage may be lower than that usually recommended.

As a result of administration of Ceclor, a false-positive reaction for glucose in the urine may occur. This has been observed with Benedict's and Fehling's solutions and also with Clinitest* tablets but not with Tes-Tape* (Glucose Enzymatic Test Strip, USP, Lilly).

Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.

Usage in Pregnancy — *Pregnancy Category B* — Reproduction studies have been performed in mice and rats at doses up to 12 times the human dose and in ferrets given three times the maximum human dose and have revealed no evidence of impaired fertility or harm to the fetus due to Ceclor* (cefaclor, Lilly). There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed.

Nursing Mothers — Small amounts of Ceclor have been detected in mother's milk following administration of single 500-mg doses. Average levels were 0.18, 0.20, 0.21, and 0.16 mcg/ml at two, three, four, and five hours respectively. Trace amounts were detected at one hour. The effect on nursing infants is not known. Caution should be exercised when Ceclor is administered to a nursing woman.

Usage in Children — Safety and effectiveness of this product for use in infants less than one month of age have not been established.

Adverse Reactions: Adverse effects considered related to therapy with Ceclor are uncommon and are listed below:

Gastrointestinal symptoms occur in about 2.5 percent of patients and include diarrhea (1 in 70).

Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment. Nausea and vomiting have been reported rarely.

Hypersensitivity reactions have been reported in about 1.5 percent of patients and include morbilliform eruptions (1 in 100). Pruritus, urticaria, and positive Coombs' tests each occur in less than 1 in 200 patients. Cases of serum-sickness-like reactions (erythema multiforme or the above skin manifestations accompanied by arthritis/arthralgia and, frequently, fever) have been reported. These reactions are apparently due to hypersensitivity and have usually occurred during or following a second course of therapy with Ceclor. Such reactions have been reported more frequently in children than in adults. Signs and symptoms usually occur a few days after initiation of therapy and subside within a few days after cessation of therapy. No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome.

Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy.

Other effects considered related to therapy included eosinophilia (1 in 50 patients) and genital pruritus or vaginitis (less than 1 in 100 patients).

Causal Relationship Uncertain — Transitory abnormalities in clinical laboratory test results have been reported. Although they were of uncertain etiology, they are listed below to serve as alerting information for the physician.

Hepatic — Slight elevations in SGOT, SGPT, or alkaline phosphatase values (1 in 40).

Hematopoietic — Transient fluctuations in leukocyte count, predominantly lymphocytosis occurring in infants and young children (1 in 40).

Renal — Slight elevations in BUN or serum creatinine (less than 1 in 500) or abnormal urinalysis (less than 1 in 200).

[0617B2R1]

Note: Ceclor* (cefaclor, Lilly) is contraindicated in patients with known allergy to the cephalosporins and should be given cautiously to penicillin-allergic patients.

Penicillin is the usual drug of choice in the treatment and prevention of streptococcal infections, including the prophylaxis of rheumatic fever. See prescribing information.

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> Soter NA, Wasserman SI, Austen KF. Cold urticaria release into circulation of histamine and eosinophil chemotactic factor of anaphylaxis during cold challenge. N Engl J Med 1976;294:687-90.

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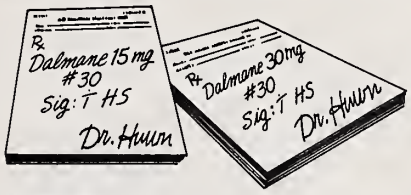
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THE COVER

Teaching and learning are integral parts of the art and science of medicine. The same spirit of innovative teaching and learning depicted in the famous painting on our cover, *Portrait of Professor Gross (The Gross Clinic),* (1875, oil on canvas) will also prevail at MAG's Scientific Assembly in Atlanta this November. The photo is courtesy of the Jefferson Medical College of Thomas Jefferson University, Philadelphia.

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—President's Letter



"Let's Git IT"

(With apologies to Vince Dooley and other coaches)

So, ole Vince is considering running for the senate. I've heard and read many comments, pro and con, regarding his ability, or lack of it, in the political arena. By the time this is published, he probably will have decided, and history will record this event appropriately.

It is not my purpose to support, or not support, Vince Dooley, but the general comments that I've heard about football coaches and sports brought back some personal memories.

As a lad growing up in a small town in Mississippi, I was exposed to the game of football as a discipline almost resembling religion. Not only was it supposed to build healthy bodies and promote clean living, but it was also supposed to teach us the principles of life as related to everyday responsibilities.

Toward this end, we were subjected not only to physical training but also to lectures and pep talks about fair play, team effort, and winning. Thinking back about those years brought to mind one particular coach who frequently used the following approach.

"Boys" he would say, "You gotta 'git it,' and let me say it better — You gotta git IT!, and what I mean is IT . . . I . . . T." And, he would then write a capital "I" on the blackboard and proceed. "You take "I" — that stands for individual, yes individual effort, and I mean I don't want 90% individual effort, or 95%, or 100%. I want 110% of you, boy, at all times. That's what I call *individual effort.*"

Then he would write a capital "T" on the blackboard, turn and say, "and this 'T' stands for team effort. You gotta work together, you gotta help each other in this game if you expect to win.

"So you put them together — *individual effort* and *team effort,* and that spells IT. See what I mean boys? You gotta git IT."

As doctors, we were and are continuously asked for maximum individual effort, and generally speaking we give it. That's been the backbone of our lives since that first day in medical school.

Team effort has ordinarily not been stressed except in certain circumstances. However, this seems to be evolving into a much more important aspect of our lives if we are going to preserve and maintain our input into the practice of medicine.

Maybe this coach's pep talk is simple, but I still feel it packs a big punch, and we in the medical profession should think about it more. We are already outstanding individualists but need to strengthen our team effort if we are going to win.

See here, you guys — it's spelled *IT!*

Let's git IT!

Wm. D. Logan Jr.

William D. Logan, Jr., M.D.

MEDICAL MEETING CALENDAR

SEPTEMBER

15-18 — *Sea Island:* **Georgia State OB/GYN Society Meeting.** Contact Ralph Tillman, MD, Pres., Ga. State OB/GYN Society, 5040 Snapfinger Woods Dr., Ste. 204, Decatur 30035. PH:404/981-1123.

15-18 — *Sea Island:* **Georgia Urological Association Annual Meeting.** Category 1 credit. Contact Jack Amie, MD, Secy.-Treas., Ga. Urological Assn., 2418 Parkwood Dr., Brunswick 31520. PH:912/264-6362.

18-20 — *Savannah:* **Neonatology — The Sick Newborn.** AMA Category 1 and AAFP prescribed credit. Contact Div. of Cont. Ed., MCG, Augusta 30912. PH:404/828-3967.

19-21 — *Sea Island:* **Georgia Surgical Society Meeting.** Category 1 credit. Contact William McGarity, MD, Secy-Treas., GSS, Emory Univ. Clin, 1365 Clifton Rd., NE, Atlanta 30322. PH:404/321-0111 Ext. 3322.

23-27 — *Atlanta:* **Magnetic Resonance Imaging.** Category 1 credit. Contact Office of CME, Emory Univ. Sch. of Med., 1440 Clifton Rd., NE, Atlanta 30322. PH:404/329-5695.

26-28 — *Hilton Head Island, SC:* **Frontiers in Nutrition.** AMA Category 1 and AAFP prescribed credit. Contact Div. of Cont. Ed., MCG, Augusta 30912. PH:404/828-3967.

OCTOBER

2-3 — *Atlanta:* **Georgia Chapter, Amer. Acad. of Pediatrics Fall Meeting.** Category 1 credit. Contact William Mankin, Exec. Secy., Ga. Chapter, AAP, 4059 Land O'Lakes Dr., NE, Atlanta 30342. PH:404/237-3922.

4-5 — *Atlanta:* **The Brain and the Heart: Clinical Interactions in Cardiovascular Disease.** Category 1 credit. Contact Office of CME, Emory Univ. Sch. of Med., 1440 Clifton Rd., NE, Ste. 110, Atlanta 30322. PH:404/329-5695.

4-5 — *Atlanta:* **Child Sexual Abuse: A "Touching" Dilemma: Diagnosis, Treatment and Legal Issues.** Category 1 credit. Contact Office of CME, Emory Univ. Sch. of Med., 1440 Clifton Rd., NE, Atlanta 30322. PH:404/329-5695.

8 — *Columbus:* **5th Day of Endocrinology.** Category 1 credit. Contact Mrs. Judy Anderson, Internal Medicine Found., P. O. Box 311, Columbus 31902-0311. PH:404/571-1454.

10-11 — *Atlanta:* **Preventing Disease and Promoting Health in the Minority Community.** Category 1 and AAFP prescribed credits. Contact Stephen Daniel, Ph.D., Morehouse Sch. of Med., 720 Westview Dr., SW, Atlanta 30310. PH:404/752-1631.

16-19 — *Hilton Head Island, SC:* **Recent Developments in the Clinical Management of Diabetes and Endocrine Disorders.** Category 1 and AAFP prescribed credit. Contact Edwin Bransome, Jr., MD, Dept. of Medicine, MCG, Augusta 30912. PH:404/828-3445.

17-18 — *Atlanta:* **Current Issues in Reproductive Health.** Category 1 credit. Contact Office of CME, Emory Univ. Sch. of Med., 1440 Clifton Rd., NE, Ste. 110, Atlanta 30322. PH:404/329-5695.

17-20 — *Sea Island:* **Georgia Orthopaedic Society.** Contact William Collins, MD, Secy-Treas., Ga. Orthopaedic Society, 993-C Johnson Ferry Rd., NE, Atlanta 30342. PH:404/255-4582.

17-20 — *Pine Mountain:* **Rehabilitation of the Coronary Patient.** Category 1 credit. Contact Extramural Programs Department, Amer. Coll. of Cardiology, 9111 Old Georgetown Rd., Bethesda, MD 20814.

19-20 — *Atlanta:* **American Acad. of Facial Plastic & Reconstructive Surgery.** Contact AAFPRS, 1101 Vermont Ave., NW, Ste. 304, Washington, DC 20005. PH:202/842-4500.

19-20 — *Callaway Gardens:* **Georgia Gastroenterologic Society.** Category 1 credit. Contact Joe Griffin, Jr., MD, Vice Pres., GGS, G.I. Med., BIW 558, MCG, Augusta 30912. PH:404/828-2238.

20-24 — *Atlanta:* **Amer. Acad. of Otolaryngology — Head and Neck Surgery.** Contact AAOHNS, 1101 Vermont Ave., NW, Ste. 302, Washington, DC 20005. PH:202/289-4607.

23-25 — *Atlanta:* **Neuroradiology Update — 1985.** Category 1 credit. Contact Office of CME, Emory Univ. Sch. of Med., 1440 Clifton Rd., NE, Ste. 110, Atlanta 30322. PH:404/329-5695.

25-26 — *Savannah:* **Georgia Society of Internal Medicine Annual Meeting.** Contact Albert Carr, MD, MCG, Augusta 30912. PH:404/828-2736.

27-30 — *Unicoi State Park:* **Institute on Group Behavior and Group Leadership.** Category 1 credit. Contact Ofice of CME, Emory Univ. Sch. of Med., 1440 Clifton Rd., NE, Atlanta 30322. PH:404/329-5695.

30 — *Atlanta:* **Seventh Annual Joseph S. Skobba Symposium.** Category 1 credit. Contact Office of CME, Emory Univ. Sch. of Med., 1440 Clifton Rd., NE, Atlanta 30322. PH:404/329-5695.

NOVEMBER

1 — *Atlanta:* **Endometriosis Update.** Category 1 and AAFP prescribed credit. Contact Amir Ansari, MD, Dir., Dept. OB/GYN, Ga. Baptist Med. Ctr., 340 Blvd. NE, Ste. 641, Atlanta 30312. PH:404/653-4767.

4-8 — *Atlanta:* **Magnetic Resonance Imaging.** Category 1 credit. Contact Office of CME, Emory Univ. Sch. of Med., 1440 Clifton Rd., NE, Atlanta 30322. PH:404/329-5695.

11-15 — *Augusta:* **Obstetrics and Gynecology.** Category 1 credit. Contact Div. of Cont. Ed., MCG, Augusta 30912. PH:404/828-3967.

14-16 — *Atlanta:* **Georgia Acad. of Family Physicians Annual Meeting.** Contact Camille Day, GAFP, 11 Corporate Square, Ste. 205, Atlanta 30329. PH:404/321-7445.

21-24 — *Atlanta:* **From Head to Toes: A Practical Approach to Orthopaedic for the Primary Care Physician.** Category 1 credit. Contact Office of CME, Emory Univ. Sch. of Med., 1440 Clifton Rd., NE, Atlanta 30322. PH:404/329-5695.

22-24 — *Atlanta:* **MAG Scientific Assembly.** Category 1 credit. Contact Stephen Davis, MAG, 938 Peachtree St., Atlanta 30309. PH:404/876-7535 or 1-800-282-0224 (toll free in Ga.).

DECEMBER

2-6 — *Atlanta:* **Magnetic Resonance Imaging.** Category 1 credit. Contact Office of CME, Emory Univ. Sch. of Med., 1440 Clifton Rd., NE, Atlanta 30322. PH:404/329-5695.

4-6 — *Atlanta:* **Techniques in Orthopaedic Surgery: Total Knee Replacement.** Category 1 credit. Contact Office of CME, Emory Univ. Sch. of Med., 1440 Clifton Rd., NE, Atlanta 30322. PH:404/329-5695.

Preserving Medicine As A Profession

Maintain an active curiosity and role in scientific advances in medicine.

MEDICINE as a profession has a long and honored reputation. We must preserve it. Unfortunately we are rapidly entering a downward trend with increasing government and business control. Paperwork, Medicare regulations, liability lawsuits, etc. are taking their toll — slowly eroding the profession. In my opinion, medicine will continue on a downhill slide for the time being. Eventually, the course will change upwards. This may take 10, 20, 50 years or longer.

Practicing and academic physicians throughout Georgia can actively participate in discussions and presentations of interesting medical problems and advancements in medical science.

But what are we to do in the meantime? Part of the answer is to maintain an active curiosity and role in the scientific advances and developments in medicine. There are several ways to do this, such as journal reading, national medical society meetings, postgraduate courses on specific topics, and local medical society meetings.

Several comments may be made regarding this answer. It is essential that we regularly read several medical journals. It is important to support our national medical societies. However, these meetings are largely a passive experience for the majority of physicians. Postgraduate courses have proliferated to the point of becoming excessive and redundant. This has occurred in response to the CME requirements — with the whole concept becoming rather controversial.

Now we are down with what to do with our local medical societies. This is where the majority of physicians can participate and maintain their scientific curiosity. The Medical Association of Georgia presents an Annual Scientific Assembly as a major forum for Specialty Society Education. This Scientific Assembly is where practicing and academic physicians throughout Georgia can actively participate in discussions and presentations of interesting medical problems and advancements in medical science. This is an invaluable opportunity for all concerned. The 1985 Scientific Assembly will meet in Atlanta at the Ritz-Carlton Buckhead Hotel, November 22-24 (Friday-Sunday). Practicing physicians should attend to maintain their scientific interest in medicine. University physicians should attend to stimulate their scientific and teaching interests. Together only good can happen. This is one small way that will help us survive as an honored profession through the coming "Dark Ages" of government and business control.

Ellis B. Keener, M.D.
Chairman,
Annual Scientific Assembly
434 Academy St., NE
Gainesville, GA 30501

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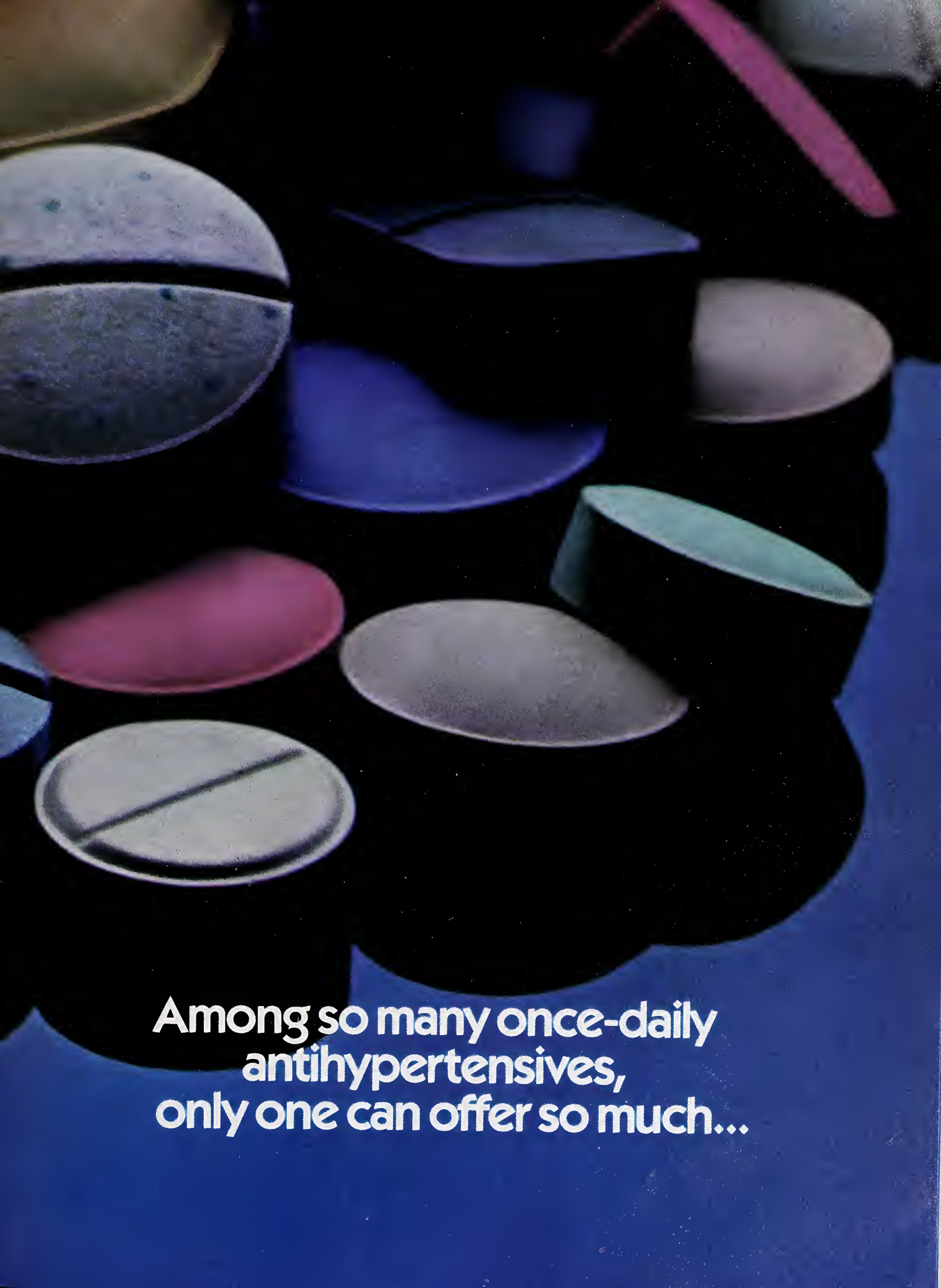
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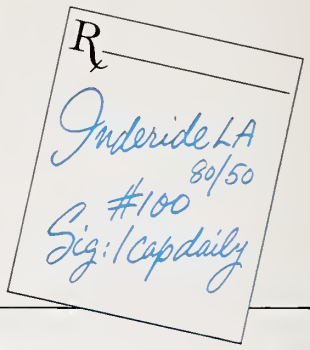
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CONTRAINDICATIONS

Propranolol hydrochloride (INDERAL®):
Propranolol is contraindicated in: 1) cardiogenic shock; 2) sinus bradycardia and greater than first degree block; 3) bronchial asthma; 4) congestive heart failure (see WARNINGS) unless the failure is secondary to a tachyarrhythmia treatable with propranolol.

Hydrochlorothiazide:
Hydrochlorothiazide is contraindicated in patients with anuria or hypersensitivity to this or other sulfonamide-derived drugs.

WARNINGS

Propranolol hydrochloride (INDERAL®):
CARDIAC FAILURE: Sympathetic stimulation may be a vital component supporting circulatory function in patients with congestive heart failure, and its inhibition by beta blockade may precipitate more severe failure. Although beta blockers should be avoided in overt congestive heart failure, if necessary, they can be used with close follow-up in patients with a history of failure who are well compensated, and are receiving digitalis and diuretics. Beta-adrenergic blocking agents do not abolish the inotropic action of digitalis on heart muscle.

IN PATIENTS WITHOUT A HISTORY OF HEART FAILURE, continued use of beta blockers can, in some cases, lead to cardiac failure. Therefore, at the first sign or symptom of heart failure, the patient should be digitalized and/or treated with diuretics, and the response observed closely, or propranolol should be discontinued (gradually, if possible).

IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following abrupt discontinuance of propranolol therapy. Therefore, when discontinuance of propranolol is planned, the dosage should be gradually reduced and the patient carefully monitored. In addition, when propranolol is prescribed for angina pectoris, the patients should be cautioned against interruption or cessation of therapy without the physician's advice. If propranolol therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute propranolol therapy and take other measures appropriate for the management of unstable angina pectoris. Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease who are given propranolol for other indications.

THYROTOXICOSIS: Beta blockade may mask certain clinical signs of hyperthyroidism. Therefore, abrupt withdrawal of propranolol may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm. Propranolol does not distort thyroid function tests.

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker. In one case this resulted after an initial dose of 5 mg propranolol.

MAJOR SURGERY: The necessity or desirability of withdrawal of beta-blocking therapy prior to major surgery is controversial. It should be noted, however, that the impaired ability of the heart to respond to reflex adrenergic stimuli may augment the risks of general anesthesia and surgical procedures.

Nonallergic Bronchospasm (eg, chronic bronchitis, emphysema)—PATIENTS WITH BRONCHOSPASTIC DISEASES SHOULD, IN GENERAL, NOT RECEIVE BETA BLOCKERS. INDERAL should be administered with caution since it may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta receptors.

DIABETES AND HYPOGLYCEMIA: Beta-adrenergic blockade may prevent the appearance of certain premonitory signs and symptoms (pulse rate and pressure changes) of acute hypoglycemia in labile insulin-dependent diabetes. In these patients, it may be more difficult to adjust the dosage of insulin. Hypoglycemic attacks may be accompanied by a precipitous elevation of blood pressure.

Hydrochlorothiazide:
Thiazides should be used with caution in severe renal disease. In patients with renal disease, thiazides may precipitate azotemia. In patients with impaired renal function, cumulative effects of the drug may develop.

Thiazides should also be used with caution in patients with impaired hepatic function or progressive liver disease, since minor alterations of fluid and electrolyte balance may precipitate hepatic coma.

Thiazides may add to or potentiate the action of other antihypertensive drugs. Potentiation occurs with ganglionic or peripheral adrenergic-blocking drugs.

Sensitivity reactions may occur in patients with a history of allergy or bronchial asthma.

The possibility of exacerbation or activation of systemic lupus erythematosus has been reported.

PRECAUTIONS

Propranolol hydrochloride (INDERAL®):
GENERAL: Propranolol should be used with caution in patients with impaired hepatic or renal function. Propranolol is not indicated for the treatment of hypertensive emergencies.

Beta-adrenoreceptor blockade can cause reduction of intraocular pressure. Patients should be told that propranolol may interfere with the glaucoma screening test. Withdrawal may lead to a return of increased intraocular pressure.

CLINICAL LABORATORY TESTS: Elevated blood urea levels in patients with severe heart disease, elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase.

DRUG INTERACTIONS: Patients receiving catecholamine-depleting drugs, such as reserpine, should be closely observed if propranolol is administered. The added catecholamine-blocking action may produce an excessive reduction of resting sympathetic nervous activity, which may result in hypotension, marked bradycardia, vertigo, syncopal attacks, or orthostatic hypotension.

CARCINOGENESIS, MUTAGENESIS, IMPAIRMENT OF FERTILITY: Long-term studies in animals have been conducted to evaluate toxic effects and carcinogenic potential. In 18-month studies, in both rats and mice, employing doses up to 150 mg/kg/day, there was no evidence of significant drug-induced toxicity. There were no drug-related tumorigenic effects at any of the dosage levels. Reproductive studies in animals did not show any impairment of fertility that was attributable to the drug.

PREGNANCY: Pregnancy Category C. Propranolol has been shown to be embryotoxic in animal studies at doses about 10 times greater than the maximal recommended human dose. There are no adequate and well-controlled studies in pregnant women. Propranolol should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

NURSING MOTHERS: Propranolol is excreted in human milk. Caution should be exercised when propranolol is administered to a nursing mother.

PEDIATRIC USE: Safety and effectiveness in children have not been established.

Hydrochlorothiazide:
GENERAL: Periodic determination of serum electrolytes to detect possible electrolyte imbalance should be performed at appropriate intervals.

All patients receiving thiazide therapy should be observed for clinical signs of fluid or electrolyte imbalance, namely: Hyponatremia, hypochloremic alkalosis, and hypokalemia. Serum and urine electrolyte determinations are particularly important when the patient is vomiting excessively or receiving parenteral fluids. Medication such as digitalis may also influence serum electrolytes. Warning signs irrespective of cause are: Dryness of mouth, thirst, weakness, lethargy, drowsiness, restlessness, muscle pains or cramps, muscular fatigue, hypotension, oliguria, tachycardia, and gastrointestinal disturbances such as nausea and vomiting.

Hypokalemia may develop, especially with brisk diuresis, when severe cirrhosis is present, or during concomitant use of corticosteroids or ACTH.

Interference with adequate oral electrolyte intake will also contribute to hypokalemia. Hypokalemia can sensitize or exaggerate the response of the heart to the toxic effect of digitalis (eg, increased ventricular irritability). Hypokalemia may be avoided or treated by use of potassium supplements, such as foods with a high potassium content.

Any chloride deficit is generally mild and usually does not require specific treatment, except under extraordinary circumstances (as in liver or renal disease). Dilutional hyponatremia may occur in edematous patients in hot weather; appropriate therapy is water restriction, rather than administration of salt, except in rare instances when the hyponatremia is life-threatening. In actual salt depletion, appropriate replacement is the therapy of choice.

Hyperuricemia may occur or frank gout may be precipitated in certain patients receiving thiazide therapy.

Insulin requirements in diabetic patients may be increased, decreased, or unchanged. Diabetes mellitus which has been latent may become manifest during thiazide administration.

If progressive renal impairment becomes evident, consider withholding or discontinuing diuretic therapy.

Thiazides may decrease serum PBI levels without signs of thyroid disturbance.

Calcium excretion is decreased by thiazides. Pathologic changes in the parathyroid gland with hypercalcemia and hypophosphatemia have been observed in a few patients on prolonged thiazide therapy. The common complications of hyperparathyroidism, such as renal lithiasis, bone resorption, and peptic ulceration have not been seen. Thiazides should be discontinued before carrying out tests for parathyroid function.

DRUG INTERACTIONS: Thiazide drugs may increase the responsiveness to tubocurarine.

The antihypertensive effects of thiazides may be enhanced in the postsympathectomy patient. Thiazides may decrease arterial responsiveness to norepinephrine. This diminution is not sufficient to preclude effectiveness of the pressor agent for therapeutic use.

PREGNANCY: Pregnancy Category C. Thiazides cross the placental barrier and appear in cord blood. The use of thiazides in pregnancy requires that the anticipated benefit be weighed against possible hazards to the fetus. These hazards include fetal or neonatal jaundice, thrombocytopenia, and possibly other adverse reactions which have occurred in the adult.

NURSING MOTHERS: Thiazides appear in human milk. If use of the drug is deemed essential, the patient should stop nursing.

PEDIATRIC USE: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS

Propranolol hydrochloride (INDERAL®):
Most adverse effects have been mild and transient and have rarely required the withdrawal of therapy.

Cardiovascular: Bradycardia; congestive heart failure; intensification of AV block; hypotension; paresthesia of hands; thrombocytopenic purpura; arterial insufficiency, usually of the Raynaud type.

Central Nervous System: Lightheadedness, mental depression manifested by insomnia, lassitude, weakness, fatigue, reversible mental depression progressing to catatonia; visual disturbances; hallucinations; an acute reversible syndrome characterized by disorientation for time and place, short-term memory loss, emotional lability, slightly clouded sensorium, and decreased performance on neuropsychometrics.

Gastrointestinal: Nausea, vomiting, epigastric distress, abdominal cramping, diarrhea, constipation, mesenteric arterial thrombosis, ischemic colitis.

Allergic: Pharyngitis and agranulocytosis; erythematous rash, fever combined with aching and sore throat; laryngospasm and respiratory distress.

Respiratory: Bronchospasm.

Hematologic: Agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpura.

Auto-Immune: In extremely rare instances, systemic lupus erythematosus has been reported.

Miscellaneous: Alopecia; LE-like reactions; psoriasiform rashes; dry eyes; male impotence and Peyronie's disease have been reported rarely. Oculomucocutaneous reactions involving the skin, serous membranes, and conjunctivae reported for a beta blocker (practolol) have not been associated with propranolol.

Hydrochlorothiazide:
Gastrointestinal: Anorexia, gastric irritation, nausea, vomiting, cramping, diarrhea; constipation; jaundice (intrahepatic cholestatic jaundice); pancreatitis; sialadenitis.

Central Nervous System: Dizziness, vertigo; paresthesias; headache; xanthopsia.

Hematologic: Leukopenia, agranulocytosis; thrombocytopenia; aplastic anemia.

Cardiovascular: Orthostatic hypotension (may be aggravated by alcohol, barbiturates, or narcotics).

Hypersensitivity: Purpura, photosensitivity; rash, urticaria, necrotizing angiitis (vasculitis, cutaneous vasculitis); fever, respiratory distress, including pneumonitis; anaphylactic reactions.

Other: Hyperglycemia; glycosuria, hyperuricemia; muscle spasm; weakness, restlessness, transient blurred vision.

Whenever adverse reactions are moderate or severe, thiazide dosage should be reduced or therapy withdrawn.

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With the advance of mankind.

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From the privileged to underprivileged,
The oppressed and the free.

Under all conditions, the plagues,
the wars and calamities
of nature,
You are part of and responsible for
scientific breakthroughs;
The vaccines, the medicines
and surgeries to preserve life.

You prepared yourself by long hours of
study,
By devotion to duty and for an ideal.
You embrace the future of man's
health;
And may this ever be so, and may you be
blessed by the Lord forever.

Charles C. Lamb, M.D.
Family Practice
Albany



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ELLIS B. KEENER, M.D., GAINESVILLE

Specialty Societies Come Together
MAG Handles The Details
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FOR 10 YEARS, that's how our MAG Scientific Assembly has worked, and it's working well. The Medical Association of Georgia invites all state specialty societies to plan scientific meetings under the MAG "umbrella," and this year we have a dozen different specialty groups working with us. For each participating society, a program chairman selects topics and arranges speakers. The staff of the MAG coordinates publicity and registration and makes arrangements for meeting rooms, audiovisual needs, coffee breaks, etc. From registration fees received, the MAG in turn helps societies pay for their speakers.

This fall, the Scientific Assembly of the Medical Association of Georgia will again meet in Atlanta at the Ritz-Carlton Buckhead Hotel. Our scheduled dates are November 22-24 (Friday-Sunday). Twelve specialty programs will be presented during the weekend, each of which will be accredited for AMA Category 1 hours and other specialty credit designations.

A special feature of this year's meeting will be three Risk Management Series II Seminars for internists, neurosurgeons, and surgeons. These all-day seminars, planned by the respective state specialty societies, MAG Mutual and St. Paul, are among the first "Series II" specialty-oriented risk management seminars being offered to Georgia physicians.

Registration For Scientific Meetings

(*Please Note that registration for the three risk management seminars is being handled separately from the scientific meetings.* See page 630.)

Registration for the Scientific Assembly allows a physician to attend any and all CME programs held during the weekend. To register for these scientific meetings, please complete the registration form inserted in this *Journal*, detach it from the hotel reservation form, and mail it with your registration fee to the MAG office.

Dr. Keener, a neurosurgeon, is Chairman of MAG's Scientific Assembly.

Registration Fees — Scientific Sessions

	MAG Member	*Non-Member*
Physician	$75	$100
Resident	no fee	15
Student	no fee	10

Other health professionals: $20
Program chairmen or speakers: no fee

Hotel Reservations

If you wish hotel accommodations, please complete and detach the bottom portion of the registration form and mail it directly to the Ritz-Carlton Buckhead Hotel by November 1, 1985. Reservations will be held until 6 p.m. unless guaranteed or covered by deposit.

Highlights of the Weekend

The full program for all specialties will be printed in the October *Journal*. Here are highlights:


THE RITZ-CARLTON
THE RITZ-CARLTON

SCIENTIFIC ASSEMBLY WEEKEND AT A GLANCE

FRIDAY NOVEMBER 22		SATURDAY NOVEMBER 23		SUNDAY NOVEMBER 24
Morning	Afternoon	Morning	Afternoon	Morning
ALLERGY				
CHEST DISEASE		CHEST DISEASE		
		EMERGENCY MEDICINE		
				INTERNAL MEDICINE RISK MANAGEMENT SEMINAR
GASTRO-ENTEROLOGY				
		NEUROLOGY		
NEUROSURGERY RISK MANAGEMENT SEMINAR		NEURO-SURGERY		NEURO-SURGERY
OB/GYN				
		OPHTHALMOLOGY		
OTOLARYN-GOLOGY				
		PATHOLOGY		PATHOLOGY
		PLASTIC SURGERY		
PSYCHIATRY				
		SURGERY RISK MANAGEMENT SEMINAR		

ALLERGY: Allergy and Immunology Society of Georgia
Program Chairman: Gary Z. Lotner, M.D., Atlanta

On Friday afternoon, November 22, the Allergy program will feature two speakers. Dr. Gail Shapiro, Clinical Professor, University of Washington, will present two talks — "Complications of Allergic Rhinitis and Sinusitis in Children," and "Bronchoprovocation Testing in Children." Dr. Peter Shapiro, Chairman, Orthodontic Department, University of Washington, will speak on "Effects of Nasal Obstruction on Facial Development."

CHEST DISEASE: Georgia Thoracic Society and Georgia Chapter, American College of Chest Physicians
Program Chairmen: Paul Scheinberg, M.D., Atlanta, and Eric Honig, M.D., Atlanta

The Chest Disease program will be held on Friday, November 22, and Saturday morning, the 23rd. "Pulmonary Pharmacology" is the theme for the 1½-day meeting, which will include on Friday a reception and the annual business meeting of the Georgia Thoracic Society and Georgia Chapter, American College of Chest Physicians. The first day features the following:

- Theophyllines — John W. Jenne, M.D., Veterans Administration Hospital, Hines, IL
- Anticholinergics — Nicholas J. Gross, M.D., Veterans Administration Hospital, Hines, IL
- β-Agonists — Alan L. Plummer, M.D., Emory University School of Medicine, Atlanta
- Mechanisms of Action of Glucocorticoids in Lung Disease — John Sheagren, M.D., University of Michigan School of Medicine, Ann Arbor
- Drugs for ARDS — Roger C. Bone, M.D., Rush Presbyterian Medical Center, Chicago
- Role of Prostaglandins and Prostocycline in Lung Disease — Perry V. Halushka, M.D., Medical University of South Carolina, Charleston

Saturday morning's program on pulmonary pharmacology will feature the following:

- Calcium Channel Blockers — Jonne B. Walter, M.D., Georgia Baptist Hospital, Atlanta
- Role of Cytotoxic and Immuno-Regulator Drugs in Interstitial Lung Disease — John A. Goldman, M.D., Northside and St. Joseph's Hospitals, Atlanta
- Management of Sleep Apnea — Bashir A. Chaudhary, M.D., Medical College of Georgia, Augusta
- Newer Antibiotics — Victor Fainstein, M.D., M. D. Anderson Hospital, Houston

EMERGENCY MEDICINE: Georgia Chapter, American College of Emergency Physicians
Program Chairman: Gail V. Anderson, M.D., Atlanta

Topics for this Saturday session will include:

- Acute Eye Problems and the Emergency Physician — Alan Kozarsky, M.D., Chief of Ophthalmology, Grady Memorial Hospital, Atlanta
- Immediate Care of the Near-Drowning Victim — Douglas Krug, M.D., Kennestone Hospital, Marietta
- Acute Oral-Surgical Problems in the Emergency Department — Roger Meyer, M.D., D.D.S., Chairman, Department of Oral and Maxillo-facial Surgery, Emory University School of Medicine.

GASTROENTEROLOGY: Georgia Gastroenterologic Society
Program Chairman: Theodore Hersh, M.D., Atlanta

This program will be held on Friday afternoon, November 22. A reception will follow for members of the Society. From 2 to 5 p.m., twelve Georgia physicians will address the following subjects:

- Uretero-Sigmoid Neoplasia — Richard J. Amerson, M.D.
- The "Schroder-Alvarez" Syndrome — W. Scott Brooks, Jr., M.D.
- Collagenous Colitis Diarrhea — Julius Wenger, M.D.
- Pseudomonas Fecal Overgrowth — Theodore Hersh, M.D.
- Pruritis, Sclerosing Cholangitis, and Plasmapheresis — Joseph W. Griffin, M.D.
- Cinedefecography — Irwin R. Berman, M.D.
- Melting Obesity with the Gastric Balloon — Stanley P. Riepe, M.D.
- European Endobiliary Surgery — Francisco Cardenas, M.D.
- Hemochromatosis — Herbert L. Bonkovsky, M.D.
- MRI and Esophageal Varices — Michael E. Bernardino, M.D.
- Alternatives in Therapy of Esophageal Varices — Michael J. Henderson, M.D.
- Blood Flow and Hepatic Encephalopathy — John T. Galambos, M.D.

NEUROLOGY: Georgia Neurological Society
Program Chairman: Mark A. Kozinn, M.D., East Point

For Saturday, November 23, Dr. Kozinn has lined up three "heavy hitters":

- Barry G. Arnason, M.D., Chairman of the Department of Neurology, University of Chicago, will speak on "Neuroimmunology and Multiple Sclerosis."
- Daniel Feldman, M.D., Professor of Neurology at the Medical College of Georgia, will address the subject of "Trace Minerals in MS."
- Robert Kibler, M.D., Chairman of Emory's Department of Neurology, will speak on "New Therapies in MS."

During the meeting the Society will also hold a luncheon for its members.

NEUROSURGERY: Georgia Neurosurgical Society
Program Chairman: Herman F. Flanigin, M.D., Augusta

The Society has invited as its guest speaker, Ross Miller, M.D., former

Chief of Neurosurgery at the Mayo Clinic, and presently consulting professor at the Medical College of Georgia. Dr. Miller's topic on Saturday morning, November 23, will be "Problems of Surgery in the Posterior Fossa."

In addition, the Saturday morning program will feature:

- Surgical evacuation of intraventricular hemorrhage — Dominec Esposito, M.D., and Wade Renn, M.D.
- Cortical mapping and excision of an AVM in the dominant hemisphere — Dennis McDonnell, M.D., Drew Sullivan, M.D., Herman Flanigin, M.D., Joseph Smith, M.D., and Arthur Schlosberg, Ph.D.

On Sunday morning, Dr. Miller will discuss problem cases. The session will also include a socio-economic report and business meeting.

OBSTETRICS/GYNECOLOGY: Georgia Obstetrical-Gynecological Society
Program Chairman: Donald Sherline, M.D., Augusta

On Friday afternoon (1-5 p.m.), the OB/GYN program will feature "Electronic Fetal Heart Rate Monitoring" as its theme.

- Understanding the Basics of Electronic Fetal Heart Rate Monitoring — Donald Sherline, M.D., Professor and Chairman, Department of OB/GYN, Medical College of Georgia
- Antepartum Electronic Fetal Heart Rate Monitoring: Applications and Examples — Lawrence D. Devoe, M.D., Associate Professor and Director of Maternal-Fetal Medicine, Medical College of Georgia
- Intrapartum Electronic Fetal Heart Monitoring: Applications and Examples — Hugh W. Randall, M.D., Clinical Director, Maternal-Fetal Section, Emory University Regional Perinatal Center

That evening, the Atlanta OB/GYN Society will hold a reception and dinner for its members.

OPHTHALMOLOGY: Georgia Society of Ophthalmologists
Program Chairman: William H. Jarrett, M.D., Atlanta

The Georgia Society of Ophthalmology's Fall Meeting will be held on Saturday, November 23. The all-day program (8:30 a.m.-5:20 p.m.) will feature a variety of 10-minute papers presented by members. A highlight will be Hunter R. Stokes, M.D., Ophthalmologist of Florence, South Carolina, speaking on "Federal Intrusion in Ophthalmological Practice" and "Status of Optometric Legislation in State Legislatures."

OTOLARYNGOLOGY: Georgia Society of Otolaryngology/Head and Neck Surgery and Greater Atlanta Society of Otolarlyngology/ Head and Neck Surgery
Program Chairmen: William E. Silver, M.D., Atlanta, and Albert A. Clairmont, M.D., Atlanta

The program in Otolaryngology/Head and Neck Surgery, to be held Friday morning, will include:

- The Role of Fine Needle Aspiration Biopsy for Diagnosis of Neck Masses — Mark DuPuis, M.D.
- Free Flap Reconstruction of Head and Neck Ablations — Foad Nahai, M.D.
- Difficult Diagnoses in Procedures in Otology — James Sanders, M.D.

PATHOLOGY: Georgia Association of Pathologists and Atlanta Society of Pathologists
Program Chairmen: E. Capers Palmer, Jr., M.D., LaGrange, and William R. Anderson, M.D., Gainesville

On Saturday morning, the GAP program will feature:

- Interesting Aspects of Coagulation — Sandy Duncan, M.D., Emory
- Immunology of Heart Transplantation — Ken Sell, M.D., Emory
- AIDS Testing of Donor Blood in the Atlanta Area — Al Grindon, M.D., Science Director of the Atlanta Red Cross

A business meeting of the Georgia Association of Pathologists will follow.

The Atlanta Society of Pathologists will hold its Annual Slide Seminar on Sunday, November 24. Guest speaker this year is Dr. Tom Kardos of the University of Virginia, addressing the subject of aspiration cytology.

Microscopic slide study sets will be available for the cases which Dr. Kardos is presenting. Limited sets are available for $55, and requests should be mailed to:

William R. Anderson, M.D.
Laboratory
Northeast Georgia Medical Center
743 Spring St.
Gainesville, GA 30505

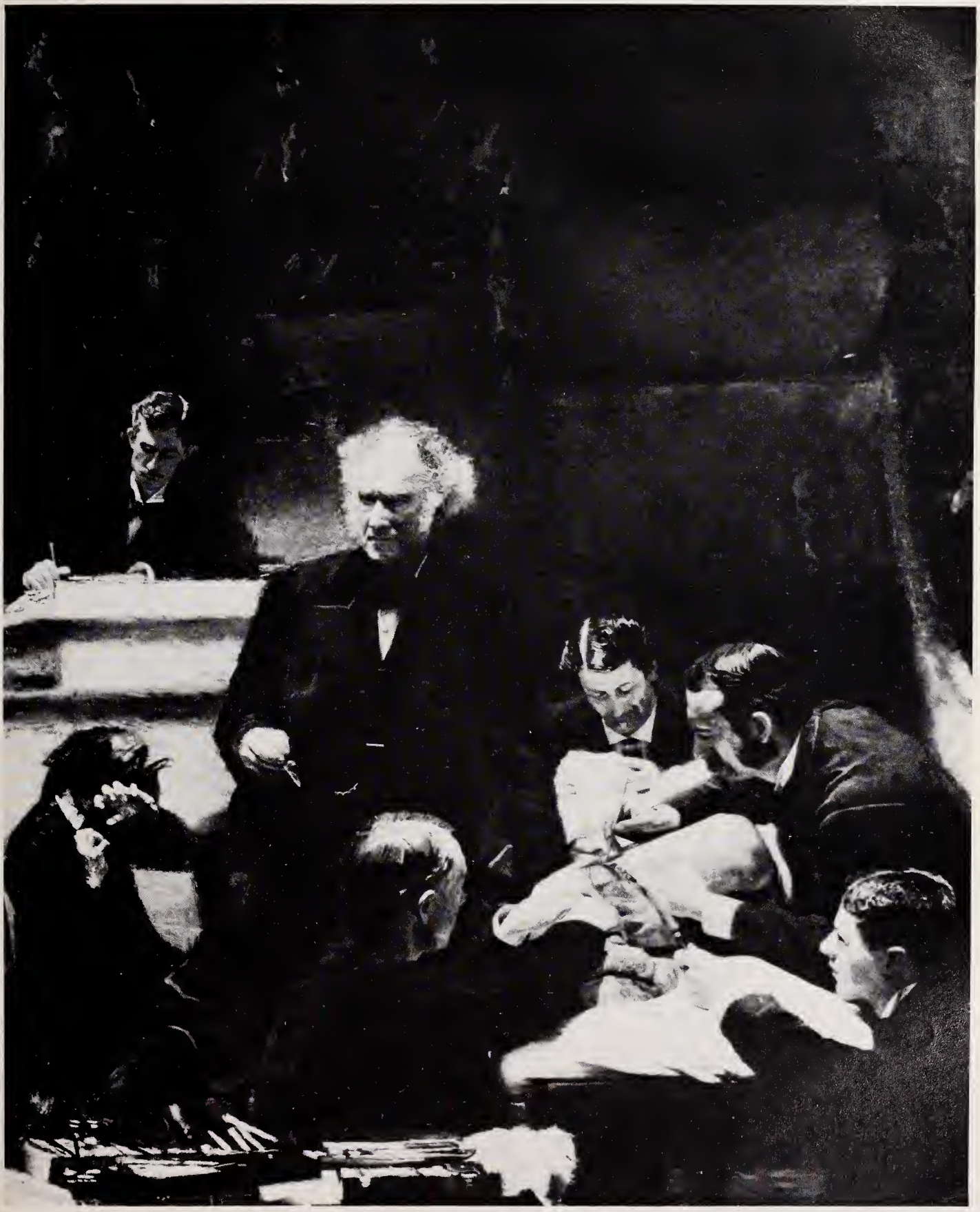
Checks should be made payable to the Atlanta Society of Pathologists.

PLASTIC SURGERY: Georgia Society of Plastic Surgeons
Program Chairman: W. Jefferson Pendergrast, M.D., Atlanta

On Saturday morning, the Georgia Society of Plastic Surgeons will present Luis O. Vasconez, M.D., Professor and Chief of the Division of Plastic Surgery, University of Alabama at Birmingham, speaking on "Flaps: A New View," and "Aesthetic Surgery of the Face: Future Approaches." A luncheon and society meeting will follow Dr. Vasconez's talks.

PSYCHIATRY: Georgia Psychiatric Association
Program Chairman: Gail F. Anderson, M.D., Atlanta

Highlighting the Georgia Psychiatric Association's meeting for Friday afternoon, November 22, will be Bob Michaels, M.D., of Cornell University and Allen Frances, M.D., of the New York Hospital Payne Whitney Psychiatric Clinic. Dr. Michaels' presentation is being supported by Upjohn Pharmaceuticals, whose assistance we gratefully acknowledge.



Portrait of Professor Gross (The Gross Clinic), *1875. Oil on canvas, 96" x 78" (243.8 x 198.2 cm). Jefferson Medical College of Thomas Jefferson University, Philadelphia. The artist himself is at right center.*

SPECIAL FEATURE:
RISK MANAGEMENT SEMINARS

During the Scientific Assembly at the Ritz-Carlton, the Medical Association of Georgia, in conjunction with MAG Mutual and St. Paul Insurance Companies, will hold three *Risk Management Series II Seminars* cosponsored by the following Specialty Societies:

Georgia Neurosurgical Society — Friday, November 22
Ga. Chapter, American College of Surgeons — Saturday, November 23
Georgia Society of Internal Medicine — Sunday, November 24.

A 10% premium discount will be offered to those physicians insured by MAG Mutual and St. Paul who attend the appropriate risk management planned for their specialty. Attendance at the entire program is required to receive the discount.

Space is limited and priority will be given to those physicians who are members of MAG and/or the specialty society sponsor. Those physicians in a specialty similar to one of the above three, who wish to attend one of these seminars, should contact their insuror to ascertain the appropriate seminar for them.

Registration Fees — Risk Management Seminars

The fees for the seminars have been set by MAG and the specialty society cosponsoring the program.

Member of MAG or sponsoring specialty society: $150
Non-member physician: $200

IMPORTANT: *Registration for the Scientific Assembly's scientific sessions is separate from registration for a risk management seminar.* A physician who plans to attend both scientific meetings and a risk management seminar may register for both by using the registration form inserted in this *Journal,* but he/she should remit payment for *both* registration fees.

The program for each of the three day-long seminars will include these topics:

- Update on professional liability
- Minimizing medical liability risks
- Precipitating situations and personality traits involved in professional liability
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- Specialty case studies
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Brief Summary of Prescribing Information
NORLESTRIN® (norethindrone acetate and ethinyl estradiol tablets, USP)

See section under **Special Notes on Administration and HOW SUPPLIED.**
Before prescribing, please see full prescribing information. A Brief Summary follows.

DESCRIPTION
Norlestrin Products are progestogen-estrogen combinations.

INDICATIONS AND USAGE
Norlestrin Products are indicated for the prevention of pregnancy in women who elect to use oral contraceptives as a method of contraception.

In clinical trials with Norlestrin 1/50 involving 25,983 therapy cycles, there was a pregnancy rate of 0.05 per 100 woman-years; in clinical trials with Norlestrin 2.5/50 involving 96,388 cycles, there was a pregnancy rate of 0.22 per 100 woman-years.

Dose-Related Risk of Thromboembolism from Oral Contraceptives: Studies have shown a positive association between the dose of estrogens in oral contraceptives and the risk of thromboembolism. It is prudent and in keeping with good principles of therapeutics to minimize exposure to estrogen. The oral contraceptive prescribed for any given patient should be that product which contains the least amount of estrogen that is compatible with an acceptable pregnancy rate and patient acceptance.

CONTRAINDICATIONS
1. Thrombophlebitis or thromboembolic disorders
2. A past history of deep-vein thrombophlebitis or thromboembolic disorders
3. Cerebral vascular or coronary artery disease
4. Known or suspected carcinoma of the breast
5. Known or suspected estrogen-dependent neoplasia
6. Undiagnosed abnormal genital bleeding
7. Known or suspected pregnancy (See WARNING No. 5)
8. Benign or malignant liver tumor which developed during the use of oral contraceptives or other estrogen-containing products.

WARNINGS

Cigarette smoking increases the risk of serious cardiovascular side effects from oral contraceptive use. The risk increases with age and with heavy smoking (15 or more cigarettes per day) and is quite marked in women over 35 years of age. Women who use oral contraceptives should be strongly advised not to smoke.

The use of oral contraceptives is associated with increased risk of several serious conditions including thromboembolism, stroke, myocardial infarction, hepatic adenoma, gallbladder disease, and hypertension. Practitioners prescribing oral contraceptives should be familiar with the following information relating to these risks.

1. *Thromboembolic Disorders and Other Vascular Problems.* An increased risk of thromboembolic and thrombotic disease associated with the use of oral contraceptives is well-established. Studies have demonstrated an increased risk of fatal and nonfatal venous thromboembolism and stroke, both hemorrhagic and thrombotic.

Cerebrovascular Disorders: In a collaborative study in women with and without predisposing causes, it was estimated that the risk of hemorrhagic stroke was 2.0 times greater in users than nonusers, and the risk of thrombotic stroke was 4.0 to 9.5 times greater.

Myocardial Infarction: An increased risk of myocardial infarction associated with oral contraceptives has been reported confirming a previously suspected association. These studies found that the greater the number of underlying risk factors (cigarette smoking, hypertension, hypercholesterolemia, obesity, diabetes, history of preeclamptic toxemia) for coronary artery disease, the higher the risk of developing myocardial infarction, regardless of whether the patient was an oral contraceptive user or not. Oral contraceptives, however, were found to be a clear additional risk factor.

It has been estimated that users who do not smoke (smoking is considered a major predisposing condition to myocardial infarction) are about twice as likely to have a fatal myocardial infarction as nonusers who do not smoke. Oral contraceptive users who are smokers have about a fivefold increased risk of fatal infarction compared to users who do not smoke, but about a tenfold to twelvefold increased risk compared to nonusers who do not smoke. The amount of smoking is also an important factor.

Risk of Dose: In an analysis of data, British investigators concluded that the risk of thromboembolism, including coronary thrombosis, is directly related to the dose of estrogen used in oral contraceptives; however, the quantity of estrogen may not be the sole factor involved.

Persistence of Risk: Two studies have suggested that an increased risk may persist for as long as 6 years after discontinuation of oral contraceptive use for cerebrovascular disease and 9 years for myocardial infarction. In addition, a prospective study suggested the persistence of risk for subarachnoid hemorrhage.

Estimate of Excess Mortality from Circulatory Diseases: The risk of diseases of the circulatory system is concentrated in older women, in those with a long duration of use, and in cigarette smokers.

A study of available data from a variety of sources concluded that the mortality associated with all methods of birth control is low and below that associated with childbirth, with the exception of oral contraceptives in women over 40 who smoke.

The risk of thromboembolic and thrombotic diseases associated with oral contraceptives increases with age after approximately age 30 and, for myocardial infarction, is further increased by hypertension, hypercholesterolemia, obesity, diabetes, or history of preeclamptic toxemia, and especially by cigarette smoking.

The physician and the patient should be alert to the earliest manifestations of thromboembolic and thrombotic disorders. Should any occur or be suspected, the drug should be discontinued immediately.

A fourfold to sixfold increased risk of postsurgery thromboembolic complications has been reported in users. If feasible, oral contraceptives should be discontinued at least four weeks before surgery of a type associated with an increased risk of thromboembolism or prolonged immobilization.

2. *Ocular Lesions.* Neuro-ocular lesions, such as optic neuritis or retinal thrombosis, have been associated with the use of oral contraceptives. Discontinue the oral contraceptive if there is unexplained sudden or gradual, partial, or complete loss of vision; onset of proptosis or diplopia; papilledema; or retinal vascular lesions.

3. *Carcinoma.* Long-term continuous administration of estrogen in certain animal species increases the frequency of carcinoma of the breast, cervix, vagina, and liver.

In humans, an increased risk of endometrial carcinoma associated with the prolonged use of exogenous estrogen in postmenopausal women has been reported. However, there is no evidence suggesting increased risk of endometrial cancer in users of conventional combination or progestogen-only oral contraceptives.

Studies found no evidence of increase in breast cancer in women taking oral contraceptives; however, an excess risk in users with documented benign breast disease was reported.

There is no confirmed evidence of an increased risk of cancer associated with oral contraceptives. Close clinical surveillance of users is, nevertheless, essential. In cases of undiagnosed persistent or recurrent abnormal vaginal bleeding, appropriate diagnostic measures should be taken to rule out malignancy. Women with a strong family history of breast cancer, or who have breast nodules, fibrocystic disease, or abnormal mammograms, should be monitored with particular care.

4. *Hepatic Tumors.* Benign hepatic adenomas have been found to be associated with oral contraceptives. Because hepatic adenomas may rupture and may cause death through intra-abdominal hemorrhage, they should be considered in women presenting abdominal pain and tenderness, abdominal mass, or shock.

A few cases of hepatocellular carcinoma have been reported in women taking oral contraceptives. The relationship of these drugs to this type of malignancy is not known at this time.

5. *Usage in or Immediately Preceding Pregnancy; Birth Defects in Offspring, and Malignancy in Female Offspring.* During early pregnancy, female sex hormones may seriously damage the offspring.

An increased risk of congenital anomalies, including heart defects and limb defects, has been reported with the use of oral contraceptives in pregnancy.

There is some evidence that triploidy and possible other types of polyploidy are increased among abortuses from women who become pregnant soon after ceasing oral contraceptives.

Pregnancy should be ruled out before continuing an oral contraceptive in any patient who has missed two consecutive menstrual periods. If the patient has not adhered to the schedule, the possibility of pregnancy should be considered at the time of the first missed period, and oral contraceptives should be withheld until pregnancy has been ruled out. If pregnancy is confirmed, the patient should be apprised of the potential risks to the fetus and the advisability of continuation of the pregnancy should be discussed.

Women who discontinue oral contraceptives with the intent of becoming pregnant should use an alternate form of contraception for a period of time before attempting to conceive.

Administration of progestogen-only or progestogen-estrogen combinations to induce withdrawal bleeding should not be used as a test of pregnancy.

6. *Gallbladder Disease.* Studies report an increased risk of surgically confirmed gallbladder disease in users of oral contraceptives.

7. *Carbohydrate and Lipid Metabolic Effects.* Because decreased glucose tolerance has been observed in a significant percentage of patients, prediabetic and diabetic patients should be carefully observed while receiving oral contraceptives.

An increase in triglycerides and total phospholipids has been observed.

8. *Elevated Blood Pressure.* An increase in blood pressure has been reported in patients receiving oral contraceptives. The prevalence in users increases with longer exposure. Age is also strongly correlated with development of hypertension. Women who previously have had hypertension during pregnancy may be more likely to develop elevation of blood pressure.

9. *Headache.* Onset or exacerbation of migraine or development of headache of a new pattern which is recurrent, persistent, or severe, requires discontinuation of oral contraceptives.

10. *Bleeding Irregularities.* Breakthrough bleeding, spotting, and amenorrhea are frequent reasons for patients discontinuing oral contraceptives. In breakthrough bleeding, nonfunctional causes should be borne in mind. In undiagnosed abnormal bleeding from the vagina, adequate diagnostic measures are indicated to rule out pregnancy or malignancy.

Women with a past history of oligomenorrhea or secondary amenorrhea, or young women without regular cycles should be advised that they may have a tendency to remain anovulatory or to become amenorrheic after discontinuation of oral contraceptives.

11. *Ectopic Pregnancy.* Ectopic as well as intrauterine pregnancy may occur in contraceptive failures.

12. *Breast-Feeding.* Oral contraceptives may interfere with lactation. Furthermore, a small fraction of the hormonal agents in oral contraceptives has been identified in the milk of mothers receiving these drugs.

PRECAUTIONS
1. A complete medical and family history should be taken prior to the initiation of oral contraceptives. The pretreatment and periodic physical examinations should include special reference to blood pressure, breasts, abdomen, and pelvic organs, including Papanicolaou smear and relevant laboratory tests. As a general rule, oral contraceptives should not be prescribed for longer than one year without another examination.

2. Preexisting uterine leiomyomata may increase in size.

3. Patients with a history of psychic depression should be carefully observed and the drug discontinued if depression recurs to a serious degree.

4. Oral contraceptives may cause fluid retention and should be prescribed with caution, and only with careful monitoring, in patients with conditions which might be aggravated.

5. Patients with a past history of jaundice during pregnancy have an increased risk of recurrence of jaundice. If jaundice develops, the medication should be discontinued.

6. Steroid hormones may be poorly metabolized and should be administered with caution in patients with impaired liver function.

7. Users may have disturbances in normal tryptophan metabolism, which may result in a relative pyridoxine deficiency.

8. Serum folate levels may be depressed.

9. The pathologist should be advised of oral contraceptive therapy when relevant specimens are submitted.

10. Certain endocrine and liver function tests and blood components may be affected. (a) Increased sulfobromophthalein retention. (b) Increased prothrombin and factors VII, VIII, IX, and X; decreased antithrombin 3; increased norepinephrine-induced platelet aggregability (c) Increased thyroid-binding globulin (TBG) leading to increased circulating total thyroid hormone. (d) Decreased pregnanediol excretion. (e) Reduced response to metyrapone test.

Drug Interactions: Reduced efficacy and increased incidence of breakthrough bleeding have been associated with concomitant use of rifampin. A similar association has been suggested with barbiturates, phenylbutazone, phenytoin sodium, tetracycline, and ampicillin.

ADVERSE REACTIONS
An increased risk of the following serious adverse reactions has been associated with oral contraceptives: thrombophlebitis; pulmonary embolism; coronary thrombosis; cerebral thrombosis; cerebral hemorrhage; hypertension; gallbladder disease; benign hepatomas; congenital anomalies.

There is evidence of an association between the following conditions and the use of oral contraceptives, although additional confirmatory studies are needed: mesenteric thrombosis, neuro-ocular lesions, eg, retinal thrombosis and optic neuritis.

The following adverse reactions have been reported in patients receiving oral contraceptives and are believed to be drug related: nausea and/or vomiting, usually the most common adverse reactions, occur in approximately 10% or less of patients during the first cycle. Other reactions, as a general rule, are seen much less frequently or only occasionally: gastrointestinal symptoms; breakthrough bleeding; spotting; change in menstrual flow; dysmenorrhea, amenorrhea during and after treatment; temporary infertility after discontinuance of treatment; edema; chloasma or melasma; breast changes; change in weight; change in cervical erosion and cervical secretion; possible diminution in lactation when given immediately postpartum; cholestatic jaundice; migraine; increase in size of uterine leiomyomata, rash (allergic); mental depression; reduced tolerance to carbohydrates; vaginal candidiasis; change in corneal curvature; intolerance to contact lenses.

The following adverse reactions have been reported and the association has been neither confirmed nor refuted: premenstrual-like syndrome; cataracts; changes in libido; chorea; changes in appetite; cystitis-like syndrome; headache; nervousness; dizziness; hirsutism; loss of scalp hair; erythema multiforme; erythema nodosum; hemorrhagic eruption; vaginitis; porphyria.

Special Notes on Administration
Menstruation usually begins two or three days, but may begin as late as the fourth or fifth day, after discontinuing medication.

After several months on treatment, bleeding may be reduced to a point of virtual absence; reduced flow may be a result of medication and not indicative of pregnancy.

HOW SUPPLIED
Norlestrin 21 1/50 is available in compacts each containing 21 tablets. Each tablet contains 1 mg of norethindrone acetate and 50 mcg of ethinyl estradiol. Available in packages of five compacts and packages of five refills.

Norlestrin 21 2.5/50 is available in compacts each containing 21 tablets. Each tablet contains 2.5 mg of norethindrone acetate and 50 mcg of ethinyl estradiol. Available in packages of five compacts and packages of five refills.

Norlestrin Fe 1/50 is available in compacts each containing 21 yellow tablets and 7 brown tablets. Each yellow tablet contains 1 mg of norethindrone acetate and 50 mcg of ethinyl estradiol. Each brown tablet contains 75 mg of ferrous fumarate. USP. Available in packages of five compacts and packages of five refills.

Norlestrin FE 2.5/50 is available in compacts each containing 21 pink tablets and 7 brown tablets. Each pink tablet contains 2.5 mg of norethindrone acetate and 50 mcg of ethinyl estradiol. Each brown tablet contains 75 mg of ferrous fumarate, USP. Available in packages of five compacts and packages of five refills.

Norlestrin 28 1/50 is available in compacts each containing 21 yellow tablets and 7 white inert tablets. Each yellow tablet contains 1 mg of norethindrone acetate and 50 mcg of ethinyl estradiol. Available in packages of five compacts and packages of five refills.

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Prevention of Bacterial Endocarditis: An Update for the Clinician

G. Maranto, M.D., G. Nadel, F. Cox, M.D., L. O. Watkins, M.D., F. W. Arensman, M.D.

The American Heart Association (AHA) recently amended its recommendations regarding prevention of bacterial endocarditis.[1] The purpose of this manuscript is to review current AHA recommendations and to discuss procedures and cardiac conditions which predispose the patient to bacterial endocarditis. Anatomic abnormalities associated with prosthetic valves, most forms of congenital heart disease, systemic-to-pulmonary artery shunts, rheumatic heart disease, prosthetic valves, and possibly mitral valve prolapse increase the likelihood of a patient acquiring bacterial endocarditis. A characteristic of all of these conditions is abnormal, turbulent flow. Transient, often asymptomatic bacteremia can result in colonization of an abnormal valve or the endocardial area downstream from the area of turbulence. Deposition of bacteria and fibrin may result in the formation of a vegetation. This vegetation may be intracardiac or, as is the case in patent ductus arteriosus or systemic-to-pulmonary artery surgical shunt, extracardiac.

As early as 1923, Lewis and Grant[2] suggested that bacteremia is the cause of endocarditis. The rationale for the prophylactic administration of antibiotics is to prevent bacteremia or, if bacteremia occurs, to reduce the size of the inoculum and the duration of bacteremia.

The AHA published guidelines for bacterial endocarditis prophylaxis in 1977[3] and amended these recommendations in 1984.[1] Neither set of recommendations is based on controlled human studies. They are, however, based on clinical experience, in vitro studies, and studies in animals and represent the current consensus of American experts.

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Cardiovascular Conditions in Which Prophylactic Antibiotics Are Indicated

Table I lists the cardiac abnormalities for which prophylactic antibiotics are currently recommended. Compared to the earlier recommendations, this list contains several important changes. All cardiovascular conditions for which prophylaxis is recommended are associated with an abnormal endothelial surface, an abnormal jet of blood, or both. The Committee notes that renal dialysis patients with arteriovenous shunt are at risk of endocarditis. This suggests that prophylaxis may be required for congenital, acquired, or surgical A-V shunts and fistulae as well as specific intracardiac abnormalities.

Endocarditis prophylaxis is *not* recommended for the conditions listed in Table II. The 1977 recommendations indicated that prophylaxis was not necessary for uncomplicated secundum atrial septal defects. The new recommendations suggest that, if

Table I — Cardiac Conditions[1] For Which Endocarditis Prophylaxis Is Recommended

Prosthetic cardiac valves (including biosynthetic valves)
Most congenital cardiac malformations
Surgically constructed systemic-pulmonary shunts
Rheumatic and other acquired valvular dysfunction
Idiopathic hypertrophic subaortic stenosis (hypertrophic obstructive cardiomyopathy)
Previous history of bacterial endocarditis
Mitral valve prolapse with insufficiency[2]

[1] Table lists common conditions but is not meant to be all-inclusive.

[2] Definitive data to provide guidance in management of patients with mitral valve prolapse are particularly limited. It is clear that in general such patients are at low risk of development of endocarditis, but the risk-benefit ratio of prophylaxis in mitral valve prolapse is uncertain.

Table II — Cardiac Conditions For Which Endocarditis Prophylaxis Is Not Recommended

Isolated secundum atrial septal defect
Secundum atrial septal defect repaired without a patch 6 or more months earlier
Patent ductus arteriosus ligated and/or divided 6 or more months earlier
Post coronary artery bypass surgery

Table III — Dental and Respiratory Procedures For Which Prophylaxis Is Recommended

All dental procedures likely to induce gingival bleeding (but not simple adjustment of orthodontic appliances or shedding of deciduous teeth)
Tonsillectomy and/or adenoidectomy
Surgical procedures or biopsy involving respiratory mucosa
Bronchoscopy, especially with a rigid bronchoscope[1]

[1] The risk with flexible bronchoscopy is low, but the necessity for prophylaxis is not yet defined.

Table IV — GI and GU Procedures For Which Prophylaxis Is Recommended

Cystoscopy
Prostatic Surgery
Urethral catheterization (especially in the presence of infection)
Urinary tract surgery
Vaginal hysterectomy
Gallbladder surgery
Colonic surgery
Esophageal dilatation
Sclerotherapy of esophageal varices
Colonoscopy
Upper GI endoscopy with biopsy
Proctosigmoidoscopic biopsy

such defects have been repaired *without* a patch more than 6 months before, prophylaxis is also not indicated.

Mitral valve prolapse (MVP) is a common congenital cardiac abnormality. Data from the Framingham study[4] indicate that the prevalence of MVP is 5% in the general population, and it may be present in as many as 17% of women in the age group from 20 to 29 years. The 1977 recommendations contained the annotation: "although cases of infective endocarditis in patients with mitral valve prolapse have been documented, the incidence appears to be relatively low, and the necessity for prophylaxis in all of these patients has not yet been established." The current recommendation, also confined to MVP with insufficiency, contains a similar tentative annotation: "Definitive data to provide guidance in management of patients with mitral valve prolapse are clearly limited. It is clear that such patients are at low risk of development of endocarditis, but the risk-benefit ratio of prophylaxis in mitral valve prolapse is uncertain." Recent risk-benefit[5] and cost-effectiveness[6] analyses have questioned the use of prophylactic penicillin before *dental procedures* in patients with mitral valve prolapse.

Procedures Which Require Prophylaxis

Dental and Respiratory

There are few new data regarding the incidence of bacteremia attributable to dental and surgical procedures. As many as 61% of patients have bacteremia within 5 minutes of dental cleaning if no prophylaxis is given.[7] On the other hand, some analysts question the importance of dental procedures as a cause of infective endocarditis.[8] Table III lists procedures associated with bacteremia and therefore requiring antibiotics. The 1977 report recommended prophylaxis when high-pressure dental cleaning devices are used. The 1984 report does not mention these specifically, but does indicate that routine professional cleaning may induce gingival bleeding which, the Committee implies, is associated with bacteremia. The Committee does not recommend prophylaxis before endotracheal intubation. However, because the incidence of bacteremia during nasotracheal intubation may be as high as 16%,[9] prophylaxis may be required before procedures in which nasotracheal intubation is anticipated.

Gastrointestinal and Genitourinary

Table IV lists the gastrointestinal and genitourinary procedures before which prophylaxis is now recommended. Bacteremia is likely to be due to enterococci or to gram negative organisms which are not exquisitely sensitive to penicillin. For this reason, use of a combination of antibiotics is recommended. The following procedures are associated with a low risk of bacteremia and therefore do not require prophylaxis: IUD insertion and removal, uterine dilatation and curettage, Cesarean sections, therapeutic abortions, and sterilization procedures. Prophylaxis is probably not warranted in percutaneous liver biopsy, uncomplicated vaginal delivery, or brief ("in- and-out") bladder catheterization when the urine is sterile.

Table V — Antibiotic Regimens[1, 2] for Dental and Upper Respiratory Procedures

Oral	*Dosage for Adults*	*Dosage for Children*
A) Penicillin V	2gm 1 hour before procedure and 1gm 6 hours later.	≥ 60 lbs. adult dose; < 60 lbs. half the adult dose
B) If penicillin allergic, erythromycin	1gm 1 hour before procedure and 500mg 6 hours later.	20mg/kg 1 hour before procedure and 10mg/kg 6 hours later.
Unable to Take Oral Medications		
Aqueous penicillin G	2 million units IM or IV ½ to one hour before procedure, 1 million units 6 hours later.	50,000 U/kg IM or IV 30 min. to 1 hour before procedure, 25,000 0/kg 6 hours later.
Parenteral		
A) Ampicillin plus gentamicin	Ampicillin 1-2gm IM or IV and gentamicin 1.5 mg/kg IM or IV 30 mins. before procedure. Then penicillin V orally 1gm 6 hours later. Alternatively repeat parenteral dose 8 hours later.	Ampicillin 50mg/kg IM or IV and Gentamicin 2mg/kg IM or IV 30 mins. before procedure. Then penicillin V, 1.0gm (≥60 lb) or 500 mg (≤60 lb). Alternatively, repeat parenteral dose of ampicillin and gentamicin 8 hours later.
	Erythromycin 1.0gm po, 1 hour before then 500mg 6 hours later.	Erythromycin 20mg/kg 1 hour before, then 10mg/kg, 6 hours later.
B) If penicillin allergic, vancomycin	1 gram IV infused slowly over 1 hour beginning 1 hour before procedure. No repeat dose is necessary.	20mg/kg IV infused slowly over 1 hour beginning 1 hour before procedure. No repeat dose is necessary.

1. Dosage for children should not exceed adult dose.
2. An oral regimen is safer and is preferred for most patients. Parenteral regimens are more likely to be effective and are recommended especially for patients with prosthetic valves, those who have had endocarditis previously, or those taking continuous oral penicillin for rheumatic fever prophylaxis.

Cardiac Procedures

1) Cardiovascular Surgery

The risk of endocarditis following coronary bypass surgery is so low that antibiotic prophylaxis of endocarditis is not warranted. Most cardiac procedures, particularly those which involve placement of a prosthetic cardiac valve or an intravascular conduit, predispose to endocarditis or endarteritis. Because staphylococci, especially *S. aureus* and *S. epidermidis,* are the most common offending organisms, the antibiotic regimen is somewhat different from that recommended for other procedures. The Committee advises that the choice of antibiotics should depend on the sensitivities of the organisms which are most common in the hospital where the surgery is being done. Usually cephalosporins and penicillinase-resistant penicillins are employed. As is the case with other procedures, the antibiotic should *not* be given for long periods before the operation, because resistant strains may emerge. The newer recommendations state that antibiotics should be continued for 2 days following surgery rather than 3 to 5 days. Rarely, endocarditis follow-

Table VI — Antibiotic Regimens for Gastrointestinal and Genitourinary Procedures

Oral	*Dosage for Adults*	*Dosage for Children 60lb.*
A) Ampicillin plus gentamicin	Ampicillin 2gm IM or IV and gentamicin 1.5mg/kg IM or IV, 30 mins.-1 hour before procedure. May repeat 8 hours later.	Ampicillin 50mg/kg IM or IV and gentamicin 2mg/kg IM or IV, 30 mins. to 1 hour before procedure. May repeat 8 hours later.
B) If penicillin allergic vancomycin plus gentamicin	Vancomycin 1gm. IV infused slowly over 1 hour beginning 1 hour before procedure. Gentamicin 1.5 mg/kg IM or IV 1 hour before procedure. Both may be repeated 8-12 hours later.	Vancomycin 20mg/kg infused slowly over 1 hour before procedure. Gentamicin 2.0mg/kg IM or IV 1 hour before procedure. Both may be repeated 8-12 hours later.
Oral[1]		
Amoxicillin	3gm 1 hour before procedure and 1.5gm 6 hours later.	If ≥60 lbs: adult dose, If <60 lbs: half the adult dose. To be given before procedure and 6 hours later.

[1] This regimen intended for minor or repetitive procedures in low-risk patients.

ing cardiac surgery has been caused by other organisms, such as gram negative bacilli, fungi, and occasionally streptococci. It is fortunate that these are rare, because effective prophylaxis against all organisms is impractical if not impossible.

2) Cardiac Catheterization

Neither angiography nor cardiac catheterization requires prophylactic antibiotic therapy.

Miscellaneous Indications for Prophylaxis

Manipulation of infected tissues such as abscesses should be preceded by prophylaxis in susceptible individuals. The choice of antibiotic should be guided by the organism suspected, but coverage for *S. aureus* is usually indicated.

Any patient who has previously had endocarditis should receive prophylaxis even in the absence of a proven cardiovascular abnormality.

Changes in the Guidelines

The 1984 recommendations are different from the 1977 recommendations in three major ways. The first change is that gentamicin is substituted for streptomycin in parenteral regimens. Because of the emergence of streptomycin-resistant organisms, especially enterococci, this change appears warranted. The combination of ampicillin and gentamicin has a synergistic effect and is superior to previous regimens.[10] A minor change is that procaine penicillin is no longer recommended before dental and upper respiratory tract manipulations. This is justified because the bacteremia following these procedures is brief (always less than 30 minutes). Thus, a long-acting penicillin is unnecessary; moreover, it increases the risk of a drug reaction.

A second category of change is the amount of antibiotic prescribed. . . . The final change involves the timing and duration of antibiotic therapy.

A second category of change is the amount of antibiotic prescribed. The 1977 guidelines suggested that one gram of ampicillin be given IM or IV in the parenteral regimens before GI and GU surgery, while the current recommendation is for 2 grams. This should result in an increased level of antibiotic and may decrease the magnitude and duration of bacteremia.

The final change involves the timing and duration of antibiotic therapy. The use of multiple low doses

is no longer recommended. Because the period of bacteremia is brief, use of a single large dose 6 hours after orodental manipulation appears warranted. The new abbreviated regimen should increase compliance.

There are several ways in which the primary physician can reduce the incidence, morbidity, and mortality from bacterial endocarditis. Although we have discussed prophylaxis in patients at high risk, we should also consider how to reduce the number of individuals who will be at risk of developing endocarditis. Several years ago, the majority of patients with endocarditis were those individuals who had a history of rheumatic heart disease. The prevalence of rheumatic heart disease has declined and with effective treatment of streptococcal pharyngitis, rheumatic valve disease can be virtually eliminated.

Patients with rheumatic heart disease or congenital heart disease which predispose to bacterial endocarditis should receive adequate prophylaxis. A major goal of both the cardiologist and the primary physician should be the education of patients concerning the consequences of endocarditis. It should be stressed that this life-threatening disease can be virtually eliminated with good dental hygiene, proper prescription of antibiotics, and excellent patient compliance.

Acknowledgements

The authors express gratitude to Ms. Jean Newman and Mrs. Pam Hawkins for manuscript preparation.

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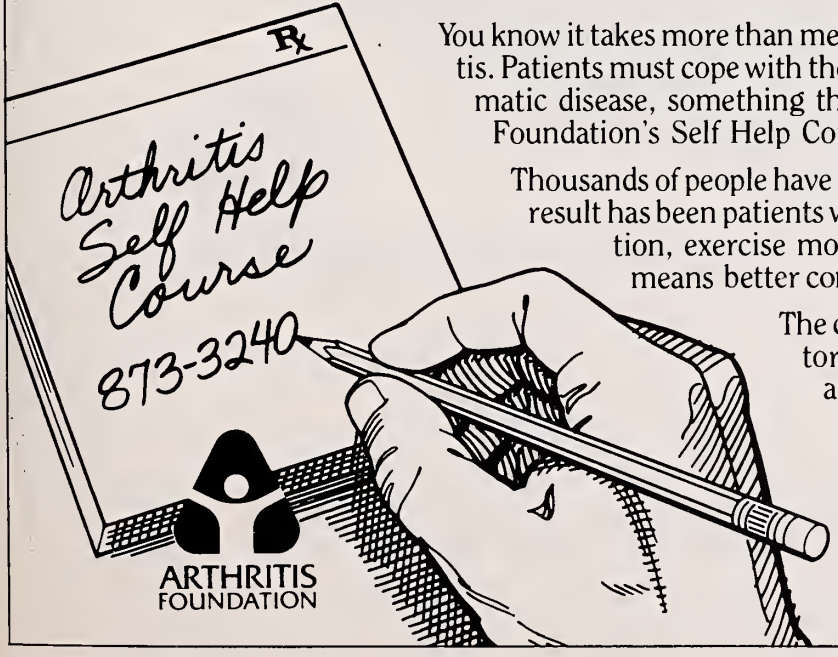
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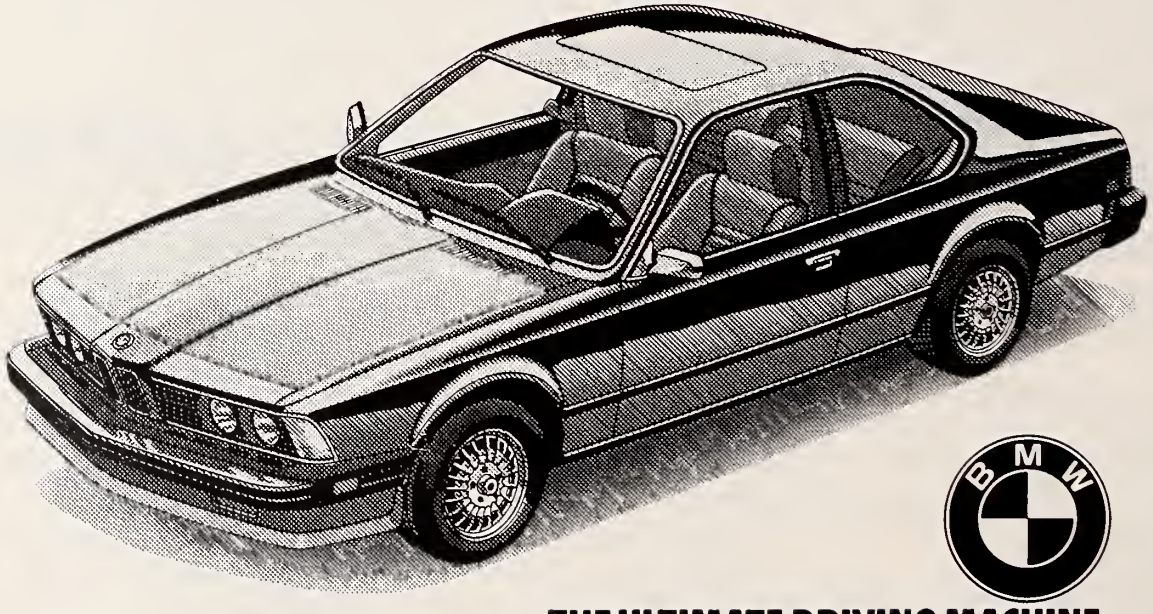
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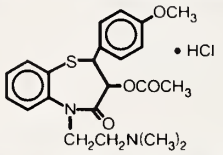
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CLINICAL PHARMACOLOGY

The therapeutic benefits achieved with CAROIZEM are believed to be related to its ability to inhibit the influx of calcium ions during membrane depolarization of cardiac and vascular smooth muscle.

Mechanisms of Action. Although precise mechanisms of its antianginal actions are still being delineated, CAROIZEM is believed to act in the following ways:

1. Angina Due to Coronary Artery Spasm: CAROIZEM has been shown to be a potent dilator of coronary arteries both epicardial and subendocardial. Spontaneous and ergonovine-induced coronary artery spasm are inhibited by CAROIZEM.
2. Exertional Angina: CAROIZEM has been shown to produce increases in exercise tolerance, probably due to its ability to reduce myocardial oxygen demand. This is accomplished via reductions in heart rate and systemic blood pressure at submaximal and maximal exercise work loads.

In animal models, diltiazem interferes with the slow inward (depolarizing) current in excitable tissue. It causes excitation-contraction uncoupling in various myocardial tissues without changes in the configuration of the action potential. Oiltiazem produces relaxation of coronary vascular smooth muscle and dilation of both large and small coronary arteries at drug levels which cause little or no negative inotropic effect. The resultant increases in coronary blood flow (epicardial and subendocardial) occur in ischemic and nonischemic models and are accompanied by dose-dependent decreases in systemic blood pressure and decreases in peripheral resistance.

Hemodynamic and Electrophysiologic Effects. Like other calcium antagonists, diltiazem decreases sinoatrial and atrioventricular conduction in isolated tissues and has a negative inotropic effect in isolated preparations. In the intact animal, prolongation of the AH interval can be seen at higher doses.

In man, diltiazem prevents spontaneous and ergonovine-provoked coronary artery spasm. It causes a decrease in peripheral vascular resistance and a modest fall in blood pressure and, in exercise tolerance studies in patients with ischemic heart disease, reduces the heart rate-blood pressure product for any given work load. Studies to date, primarily in patients with good ventricular function, have not revealed evidence of a negative inotropic effect; cardiac output, ejection fraction, and left ventricular end diastolic pressure have not been affected. There are as yet few data on the interaction of diltiazem and beta-blockers. Resting heart rate is usually unchanged or slightly reduced by diltiazem.

Intravenous diltiazem in doses of 20 mg prolongs AH conduction time and AV node functional and effective refractory periods approximately 20%. In a study involving single oral doses of 300 mg of CARDIZEM in six normal volunteers, the average maximum PR prolongation was 14% with no instances of greater than first-degree AV block. Diltiazem-associated prolongation of the AH interval is not more pronounced in patients with first-degree heart block. In patients with sick sinus syndrome, diltiazem significantly prolongs sinus cycle length (up to 50% in some cases).

Chronic oral administration of CARDIZEM in doses of up to 240 mg/day has resulted in small increases in PR interval, but has not usually produced abnormal prolongation. There were, however, three instances of second-degree AV block and one instance of third-degree AV block in a group of 959 chronically treated patients.

Pharmacokinetics and Metabolism. Oiltiazem is absorbed from the tablet formulation to about 80% of a reference capsule and is subject to an extensive first-pass effect, giving an absolute bioavailability (compared to intravenous dosing) of about 40%. CAROIZEM undergoes extensive hepatic metabolism in which 2% to 4% of the unchanged drug appears in the urine. In vitro binding studies show CARDIZEM is 70% to 80% bound to plasma proteins. Competitive ligand binding studies have also shown CARDIZEM binding is not altered by therapeutic concentrations of digoxin, hydrochlorothiazide, phenylbutazone, propranolol, salicylic acid, or warfarin. Single oral doses of 30 to 120 mg of CAROIZEM result in detectable plasma levels within 30 to 60 minutes and peak plasma levels two to three hours after drug administration. The plasma elimination half-life following single or multiple drug administration is approximately 3.5 hours. Desacetyl diltiazem is also present in the plasma at levels of 10% to 20% of the parent drug and is 25% to 50% as potent a coronary vasodilator as diltiazem. Therapeutic blood levels of CARDIZEM appear to be in the range of 50 to 200 ng/ml. There is a departure from dose-linearity when single doses above 60 mg are given; a 120-mg dose gave blood levels three times that of the 60-mg dose. There is no information about the effect of renal or hepatic impairment on excretion or metabolism of diltiazem.

INDICATIONS AND USAGE

1. **Angina Pectoris Due to Coronary Artery Spasm.** CAROIZEM is indicated in the treatment of angina pectoris due to coronary artery spasm. CAROIZEM has been shown effective in the treatment of spontaneous coronary artery spasm presenting as Prinzmetal's variant angina (resting angina with ST-segment elevation occurring during attacks).
2. **Chronic Stable Angina (Classic Effort-Associated Angina).** CAROIZEM is indicated in the management of chronic stable angina. CAROIZEM has been effective in controlled trials in reducing angina frequency and increasing exercise tolerance.

There are no controlled studies of the effectiveness of the concomitant use of diltiazem and beta-blockers or of the safety of this combination in patients with impaired ventricular function or conduction abnormalities.

CONTRAINDICATIONS

CAROIZEM is contraindicated in (1) patients with sick sinus syndrome except in the presence of a functioning ventricular pacemaker, (2) patients with second- or third-degree AV block except in the presence of a functioning ventricular pacemaker, and (3) patients with hypotension (less than 90 mm Hg systolic).

WARNINGS

1. **Cardiac Conduction.** CARDIZEM prolongs AV node refractory periods without significantly prolonging sinus node recovery time, except in patients with sick sinus syndrome. This effect may rarely result in abnormally slow heart rates (particularly in patients with sick sinus syndrome) or second- or third-degree AV block (six of 1243 patients for 0.48%). Concomitant use of diltiazem with beta-blockers or digitalis may result in additive effects on cardiac conduction. A patient with Prinzmetal's angina developed periods of asystole (2 to 5 seconds) after a single dose of 60 mg of diltiazem.
2. **Congestive Heart Failure.** Although diltiazem has a negative inotropic effect in isolated animal tissue preparations, hemodynamic studies in humans with normal ventricular function have not shown a reduction in cardiac index nor consistent negative effects on contractility (dp/dt). Experience with the use of CARDIZEM alone or in combination with beta-blockers in patients with impaired ventricular function is very limited. Caution should be exercised when using the drug in such patients.
3. **Hypotension.** Oecreases in blood pressure associated with CARDIZEM therapy may occasionally result in symptomatic hypotension.
4. **Acute Hepatic Injury.** In rare instances, patients receiving CAROIZEM have exhibited reversible acute hepatic injury as evidenced by moderate to extreme elevations of liver enzymes. (See PRECAUTIONS and AOVERSE REACTIONS.)

PRECAUTIONS

General. CAROIZEM (diltiazem hydrochloride) is extensively metabolized by the liver and excreted by the kidneys and in bile. As with any new drug given over prolonged periods, laboratory parameters should be monitored at regular intervals. The drug should be used with caution in patients with impaired renal or hepatic function. In subacute and chronic dog and rat studies designed to produce toxicity, high doses of diltiazem were associated with hepatic damage. In special subacute hepatic studies, oral doses of 125 mg/kg and higher in rats were associated with histological changes in the liver which were reversible when the drug was discontinued. In dogs, doses of 20 mg/kg were also associated with hepatic changes; however, these changes were reversible with continued dosing.

Drug Interaction. Pharmacologic studies indicate that there may be additive effects in prolonging AV conduction when using beta-blockers or digitalis concomitantly with CAROIZEM. (See WARNINGS).

Controlled and uncontrolled domestic studies suggest that concomitant use of CAROIZEM and beta-blockers or digitalis is usually well tolerated. Available data are not sufficient, however, to predict the effects of concomitant treatment, particularly in patients with left ventricular dysfunction or cardiac conduction abnormalities. In healthy volunteers, diltiazem has been shown to increase serum digoxin levels up to 20%.

Carcinogenesis, Mutagenesis, Impairment of Fertility. A 24-month study in rats and a 21-month study in mice showed no evidence of carcinogenicity. There was also no mutagenic response in in vitro bacterial tests. No intrinsic effect on fertility was observed in rats.

Pregnancy. Category C. Reproduction studies have been conducted in mice, rats, and rabbits. Administration of doses ranging from five to ten times greater (on a mg/kg basis) than the daily recommended therapeutic dose has resulted in embryo and fetal lethality. These doses, in some studies, have been reported to cause skeletal abnormalities. In the perinatal/postnatal studies, there was some reduction in early individual pup weights and survival rates. There was an increased incidence of stillbirths at doses of 20 times the human dose or greater.

There are no well-controlled studies in pregnant women; therefore, use CAROIZEM in pregnant women only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers. It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, exercise caution when CAROIZEM is administered to a nursing woman if the drug's benefits are thought to outweigh its potential risks in this situation.

Pediatric Use. Safety and effectiveness in children have not been established.

ADVERSE REACTIONS

Serious adverse reactions have been rare in studies carried out to date, but it should be recognized that patients with impaired ventricular function and cardiac conduction abnormalities have usually been excluded.

In domestic placebo-controlled trials, the incidence of adverse reactions reported during CAROIZEM therapy was not greater than that reported during placebo therapy.

The following represent occurrences observed in clinical studies which can be at least reasonably associated with the pharmacology of calcium influx inhibition. In many cases, the relationship to CARDIZEM has not been established. The most common occurrences, as well as their frequency of presentation, are: edema (2.4%), headache (2.1%), nausea (1.9%), dizziness (1.5%), rash (1.3%), asthenia (1.2%), AV block (1.1%). In addition, the following events were reported infrequently (less than 1%) with the order of presentation corresponding to the relative frequency of occurrence.

Cardiovascular:	Flushing, arrhythmia, hypotension, bradycardia, palpitations, congestive heart failure, syncope.
Nervous System:	Paresthesia, nervousness, somnolence, tremor, insomnia, hallucinations, and amnesia.
Gastrointestinal:	Constipation, dyspepsia, diarrhea, vomiting, mild elevations of alkaline phosphatase, SGOT, SGPT, and LOH.
Dermatologic:	Pruritus, petechiae, urticaria, photosensitivity.
Other:	Polyuria, nocturia.

The following additional experiences have been noted:

A patient with Prinzmetal's angina experiencing episodes of vasospastic angina developed periods of transient asymptomatic asystole approximately five hours after receiving a single 60-mg dose of CAROIZEM.

The following postmarketing events have been reported infrequently in patients receiving CAROIZEM: erythema multiforme; leukopenia; and extreme elevations of alkaline phosphatase, SGOT. SGPT, LDH, and CPK. However, a definitive cause and effect between these events and CAROIZEM therapy is yet to be established.

OVERDOSAGE OR EXAGGERATED RESPONSE

Overdosage experience with oral diltiazem has been limited. Single oral doses of 300 mg of CAROIZEM have been well tolerated by healthy volunteers. In the event of overdosage or exaggerated response, appropriate supportive measures should be employed in addition to gastric lavage. The following measures may be considered:

Bradycardia	Administer atropine (0.60 to 1.0 mg). If there is no response to vagal blockade, administer isoproterenol cautiously.
High-Oegree AV Block	Treat as for bradycardia above. Fixed high-degree AV block should be treated with cardiac pacing.
Cardiac Failure	Administer inotropic agents (isoproterenol, dopamine, or dobutamine) and diuretics.
Hypotension	Vasopressors (eg, dopamine or levarterenol bitartrate).

Actual treatment and dosage should depend on the severity of the clinical situation and the judgment and experience of the treating physician.

The oral/LD_{50}'s in mice and rats range from 415 to 740 mg/kg and from 560 to 810 mg/kg, respectively. The intravenous LD_{50}'s in these species were 60 and 38 mg/kg, respectively. The oral LD_{50} in dogs is considered to be in excess of 50 mg/kg, while lethality was seen in monkeys at 360 mg/kg. The toxic dose in man is not known, but blood levels in excess of 800 ng/ml have not been associated with toxicity.

DOSAGE AND ADMINISTRATION

Exertional Angina Pectoris Due to Atherosclerotic Coronary Artery Disease or Angina Pectoris at Rest Due to Coronary Artery Spasm. Oosage must be adjusted to each patient's needs. Starting with 30 mg four times daily, before meals and at bedtime, dosage should be increased gradually (given in divided doses three or four times daily) at one- to two-day intervals until optimum response is obtained. Although individual patients may respond to any dosage level, the average optimum dosage range appears to be 180 to 240 mg/day. There are no available data concerning dosage requirements in patients with impaired renal or hepatic function. If the drug must be used in such patients, titration should be carried out with particular caution.

Concomitant Use With Other Antianginal Agents:

1. **Sublingual NTG** may be taken as required to abort acute anginal attacks during CARDIZEM therapy.
2. **Prophylactic Nitrate Therapy**—CARDIZEM may be safely coadministered with short- and long-acting nitrates, but there have been no controlled studies to evaluate the antianginal effectiveness of this combination.
3. **Beta-blockers.** (See WARNINGS and PRECAUTIONS.)

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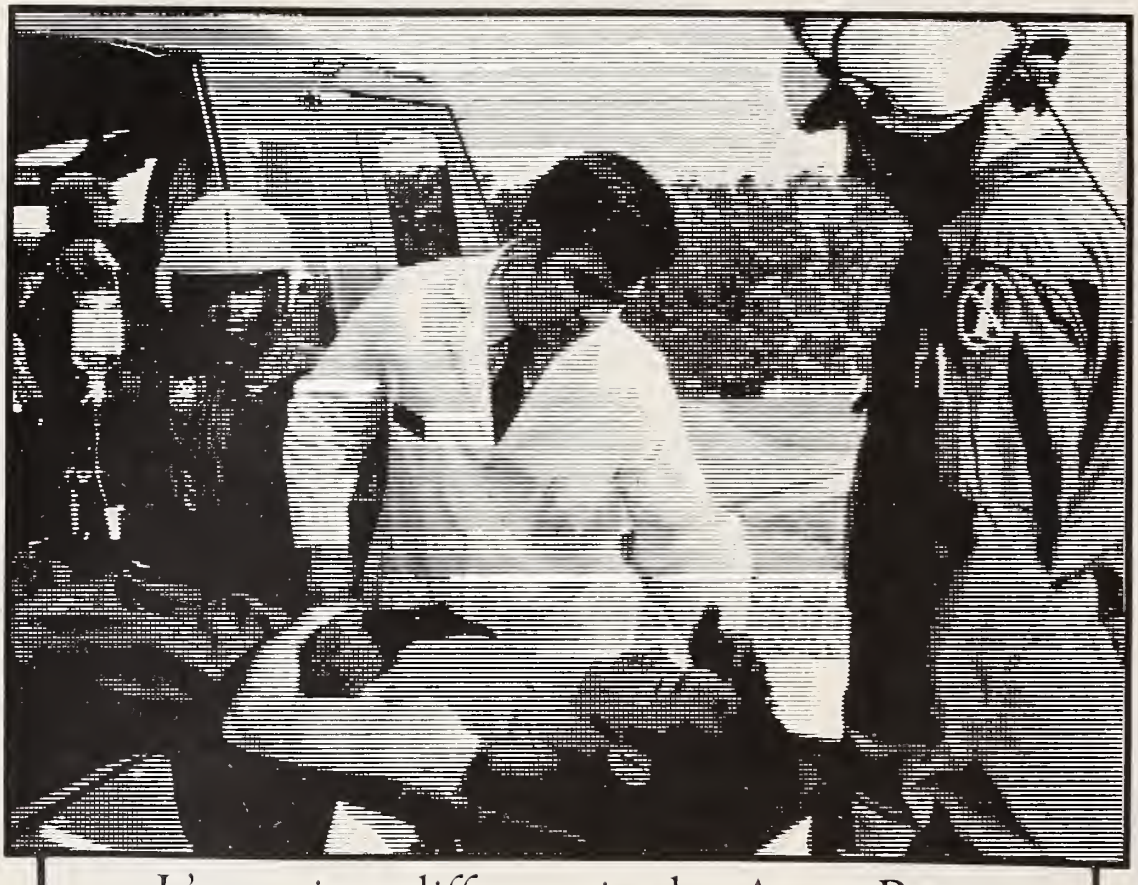
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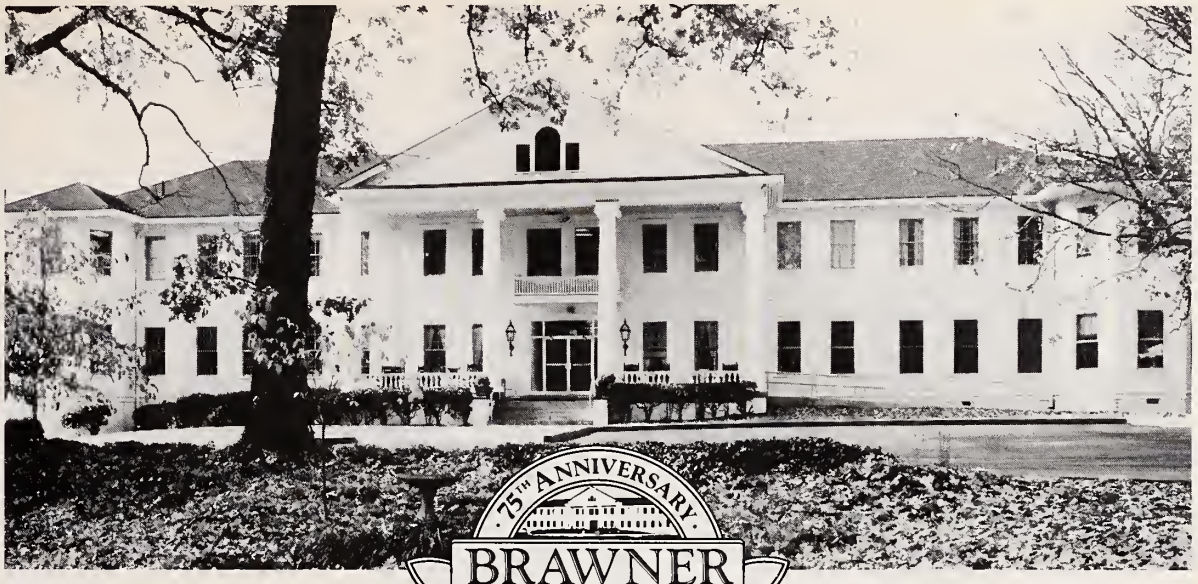


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ANTERIOR CERVICAL DISCECTOMY WITHOUT GRAFTING

RICHARD A. SMITH, M.D.

Abstract

The technique of anterior cervical microdiscectomy without grafting in cases of soft lateral or midline cervical herniated discs produces results equally as good as discectomy with interbody grafting, with relief of symptoms in over 95% of patients. The procedure is simpler and faster, with less morbidity and more rapid recovery. It may also be used in cases of cervical spondylosis when combined with adequate decompression by osteophyte removal. It is an increasingly utilized alternative choice, depending upon the experience and preference of the surgeon and the clinical problem presented.

The modern era of cervical disc surgery was introduced by Semmes and Murphy in 1943[1] and by Spurling and Scoville in 1944.[2] They used a posterior approach to the cervical spine, which remains the standard for comparison by which newer techniques may be judged.[3-6] However, anterior approaches to the cervical spine, between the carotid sheath and the tracheoesophageal bundle, have become the most common techniques used by neurosurgeons today.[7] The goals of anterior cervical disc operations are primarily to relieve static or dynamic nerve root or spinal cord compression by removal of herniated discs and osteophytes and secondarily to immobilize and obliterate abnormal joints in order to halt the progression of spondylosis.[8-10]

Anterior Cervical Approach

The first description of an anterior approach to the cervical spine with fusion is credited to Bailey and Badgley,[11] of the University of Michigan. They used an onlay graft as a stabilization procedure in 1952. Shortly afterwards, in 1955, another anterior approach to the cervical spine was developed by Smith and Robinson[12] of Johns Hopkins University. Discectomy with interbody grafting was initially used by them for the treatment of symptomatic cervical spondylosis without myelographic defect. In 1968, a modification of this method to include removal of cervical disc herniations was reported by Aronson.[8] Another anterior graft technique for cervical disc lesions, using an interbody dowel, was first used in 1955 by Walker;[13] a similar procedure was reported by Cloward in 1958.[14] During the 1960s, the anterior approach became increasingly favored.[7, 10] The 1970s brought technical refinements, including microtechnique,[15, 16] and high speed air drills.[16] The development of special attachments for the Midas-Rex high speed air drill was a significant advance reported by Wirth in 1982.[17]

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Advantages

There are many advantages of an anterior over a posterior approach.[7, 10, 18, 19] Operative exposure is simpler and faster with minimal blood loss. The entire disc cartilage can be removed, and osteophytes can be removed more safely. Retraction of nerve roots and spinal cord, which lie posterior to the disc and osteophytes, can be avoided. Patient morbidity is less; the over-all risk of complications is less. There is a significant reduction in the length of hospitalization.

Disadvantages

The most serious risk of an anterior approach is that of postoperative quadriplegia, although this complication is equally well known following laminectomy.[20] A more specific disadvantage is that this exposure does not allow thorough intraspinal exploration, if there is any uncertainty about the diagnosis, i.e., a possible intraspinal neoplasm.[10] Furthermore, some cases of developmental cervical spinal stenosis cannot be adequately decompressed anteriorly.[21] Finally, it has been suggested that anterior fusion may cause increased stress upon nonfused disc spaces, possibly resulting in an increased incidence of subsequent cervical disc rupture at another level.[7]

Anterior Cervical Discectomy Without Grafting

Initially, it was thought that anterior cervical discectomy without grafting would lead to spinal instability.[22] This supposition has proved to be unfounded.[19] The first removal of a cervical disc by the anterior route without grafting was reported by Hirsch from Sweden in 1960.[23] This approach, with numerous modifications, has grown steadily in popularity since that time, with good results reported from many centers throughout the United States and abroad.[7, 9, 10, 15, 16, 19, 22, 24-34]

Rationale

The rationale of anterior cervical discectomy without grafting is threefold: (1) discectomy alone does not cause instability;[19, 22, 29] (2) good results of operation are not related to bony fusion, but to relief of nerve root or spinal cord compression by removal of disc fragments or osteophytes;[7, 9, 10, 22, 29] and (3) bone grafting is needed only with extensive bone removal, when significant osteophytes remain, or when post-traumatic spinal instability exists.[21, 22, 30]

Advantages of Omitting Bone Graft

There are several significant advantages to omitting a bone graft in anterior cervical disc operations.[9, 10, 19, 29] The procedure is shortened. Graft related morbidity is avoided, including pain at the donor site, the need for postoperative cervical immobilization in a brace or collar, and the risks of extrusion or resorption of the graft. Hospital stay is shorter; recovery is faster. The results are equally good.[7] The fusion rate is approximately 90%, the same as when grafting has been done.[34]

Disadvantages of Omitting the Bone Graft

Postoperative disc space collapse, in the presence of significant posterolateral osteophytes, may potentially cause slight but symptomatic foraminal encroachment upon nerve roots. This can be avoided either by foraminotomy, with more radical removal of the osteophytes, or else by the use of a distracting bone graft.[19, 21, 34] There may be mild kyphotic angulation in some cases, but this is usually temporary and asymptomatic.[19] In some cases, postoperative relief of pain may be slower without than with a bone graft, but ultimately similar.[31] A syndrome has been described of postoperative pain contralateral to the side of a herniated disc following anterior removal without grafting; this is usually transient.[7, 19] Rarely, persistent pain has required re-operation, either anteriorly with interbody grafting[7, 15] or posteriorly.[7, 31]

Omission of the bone graft is obviously contraindicated in the presence of any spinal instability or subluxation.[21, 30]

Results of Present Series (50 Cases)

1. *Lateral soft herniated disc (42 cases).*

Forty-two cases of lateral soft disc herniation have undergone anterior cervical discectomy without grafting and have had postoperative follow-up for 6 months or more. Excellent or good results was obtained in 41 cases: all preoperative radicular pain was relieved in 39 cases, minimal or mild pain persists in two cases; abnormal neurologic signs were improved or unchanged. Because of persistent symptoms, one patient underwent a secondary anterior interbody graft, with relief, although nothing abnormal was found at reoperation. The only significant complication was a wound infection in one patient. Fusion occurred in 96% of the patients with sufficient follow-up. Fusion failed to occur in the only two level procedure performed. There have been no recurrences at the same or another level. Two of the patients had a prior herniation at the same level, removed by laminectomy; they each preferred the anterior operation.

2. *Central soft herniated disc (2 cases)*

There have been only two cases in this group, both with bilateral radicular symptoms without myelopathy. The results were excellent, and autofusion occurred in both patients. One patient had a recurrence 4 years later at another level, requiring operation. This gives a recurrence rate of 2% for the entire series.

3. *Lateral hard herniated disc (osteophyte) (2 cases).*

The results were poor in both patients, who subsequently obtained fair relief with posterior decompression. Autofusion did not occur in either patient, one of whom had a two level procedure.

4. *Central spondylosis with myelopathy (2 cases).*

These two patients each had severe cord compression at C3-4. Both had excellent results, with almost complete neurologic recovery. One obtained autofusion; the other, with more extensive bone removal, did not.

5. *Painful disc syndrome (2 cases).*

There were only two cases in this group. A degenerative disc at C5-6 was identified by analgesic discography in one patient. The other had a significant bulging midline disc at C3-4 on myelography. Neither patient had any myelopathy or radiculopathy. The early results were excellent, but long-term relief was poor in both patients, despite solid autofusion.

Representative radiographs are illustrated in Figures 1-9.

Conclusions

In the treatment of soft lateral cervical disc herniation, good results can be obtained in over 90% of patients by either an anterior or posterior approach.[7, 10, 29, 31, 34] For soft midline disc herniations, an anterior approach may be safer.[32, 35] In both groups, simple anterior discectomy is equally as effective as interbody grafting.[7, 10, 22, 31]

Good results are related not to fusion, but rather to removal of the offending lesion.[9, 22] Omitting the in-



Figure 1 — Lateral cervical spine x-ray film showing fusion C6-C7 (arrow), 5 months postoperative anterior discectomy without grafting.



Figure 2 — Fusion C5-C6 (arrow), 2 years postoperative anterior discectomy without grafting.

terbody bone graft simplifies the procedure for the patient and the surgeon, eliminating graft-related morbidity, and shortening the recovery time.[7, 10] Stability with bony or fibrous union as indicated by early absence of movement and subsequent lack of osteophyte formation has been reported in nearly all cases operated upon by anterior cervical discectomy without interbody grafting.[7, 21]

Postoperative collapse of the disc space following discectomy does not appear to be clinically significant in most cases, unless large posterolateral osteophytes are present, which might produce subsequent nerve root compression.[7, 21, 34] Radical removal of such osteophytes could increase the risk of injury to the vertebral arteries, nerve roots, or spinal cord.[18] In such cases with significant spondylosis, it may be preferable to use an interbody graft. Decompression can be achieved by opening the intervertebral foramina, unstable joints immobilized, and the spondylotic process arrested by a bone graft to distract the disc space.[8]

Traditional posterior approaches have become less common, with a gradual switch to anterior approaches with interbody fusion.

In cases of myelopathy, with central spondylotic ridging, this central bar of bone must be removed to de-



Figure 3 — Fusion C3-C4 (arrow), 2 years postoperative anterior discectomy without grafting.



Figure 4 — Preoperative cervical spine x-ray film, normal at C4-C5 (arrow).

compress the spinal cord. This can be accomplished at multiple levels, but if extensive removal of bone is required, it is probably best to use an interbody graft in these cases as well.[22]

The results of anterior operation for lateral hard discs (osteophytes) and for spondylosis with myelopathy are less good than for soft disc herniation, with or without grafting, but comparable to posterior operation.[7, 10, 31, 34]

The least good results are obtained with the painful disc syndrome: pain in the neck and occiput but without radiculopathy or myelopathy. Operation by any of these approaches may yield only a 50% chance of long-term relief.[5, 7, 36-39]

Postoperative disc space collapse, in the presence of significant posterolateral osteophytes, may potentially cause slight but symptomatic foraminal encroachment upon nerve roots.

Summary

Surgery for cervical disc disease has undergone many technical advances during the past 30 years. Traditional posterior approaches have become less common, with a gradual switch to anterior approaches with interbody fusion.[7, 10, 31, 40] More recently, results from simple discectomy indicate that fusion is not necessary in selected cases, including later-

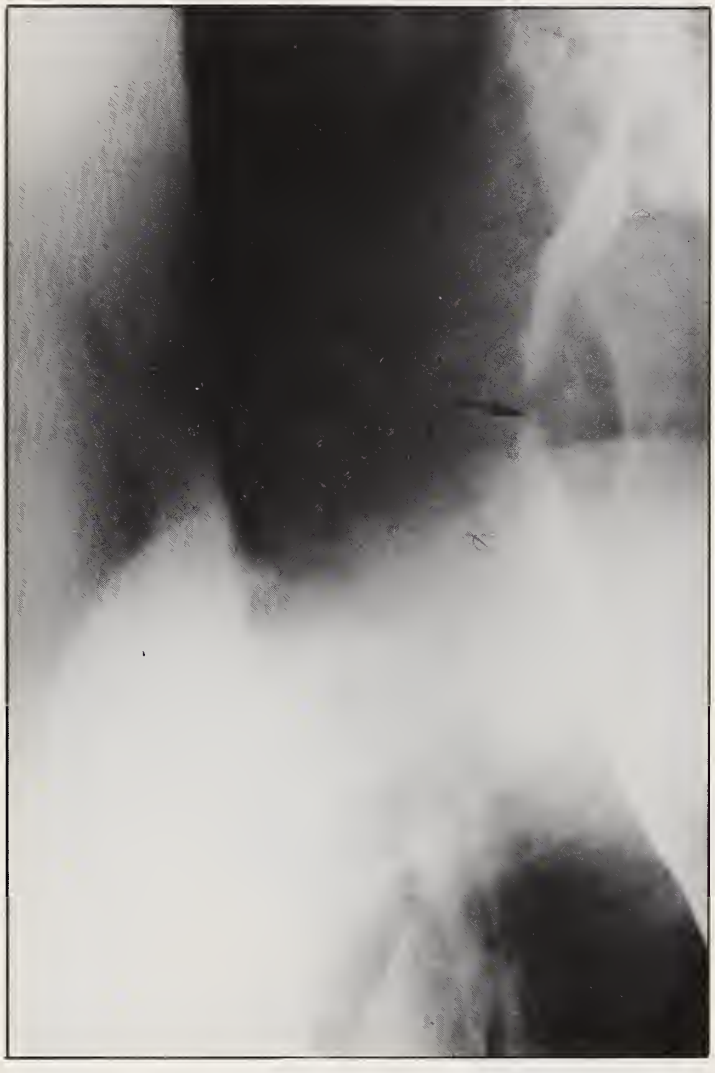


Figure 5 — Preoperative lateral myelogram, showing major filling defect at C4-C5, due to soft midline herniated disc (arrow).



Figure 7 — Cervical spine x-ray film 4 years postoperative, showing solid fusion at C4-C5 (arrow).



Figure 6 — Preoperative A-P myelogram showing bilateral root sleeve defects at C4-C5 (arrows).



Figure 8 — Postoperative lateral myelogram, normal at C4-C5 (arrow).

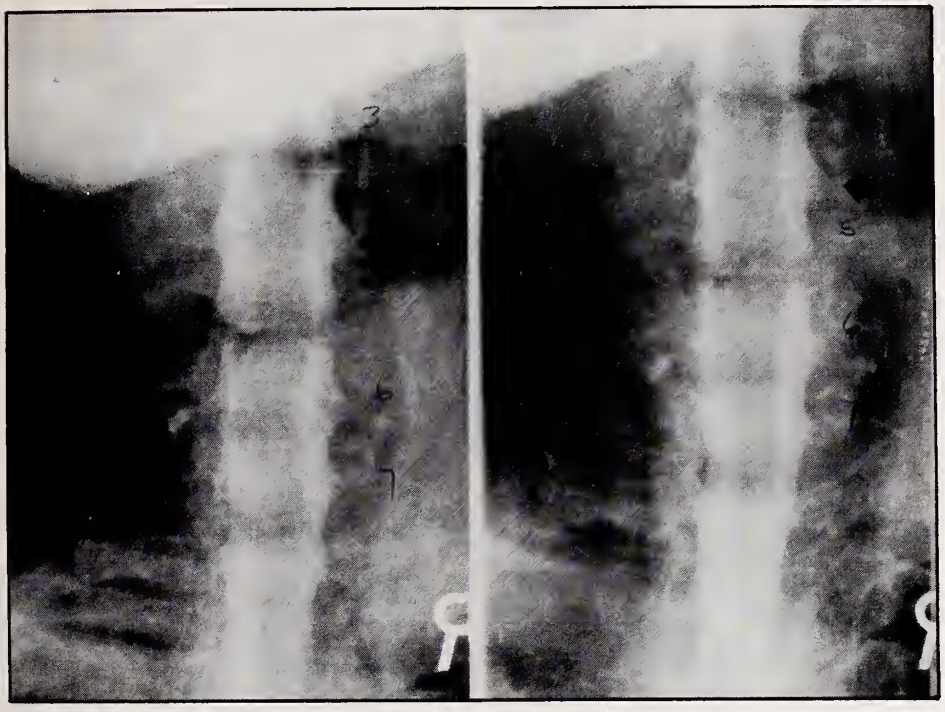


Figure 9 — Postoperative A-P myelogram, showing normal root sleeves at C4-C5 (arrow).

Good results are related not to fusion, but rather to removal of the offending lesion.

al and midline soft disc herniations without significant spondylosis.[7, 41] There are significant short-term advantages to this technique. As yet, however, there are no studies to show definite long-term advantages of any of these approaches over the others; selection remains a personal choice.[41]

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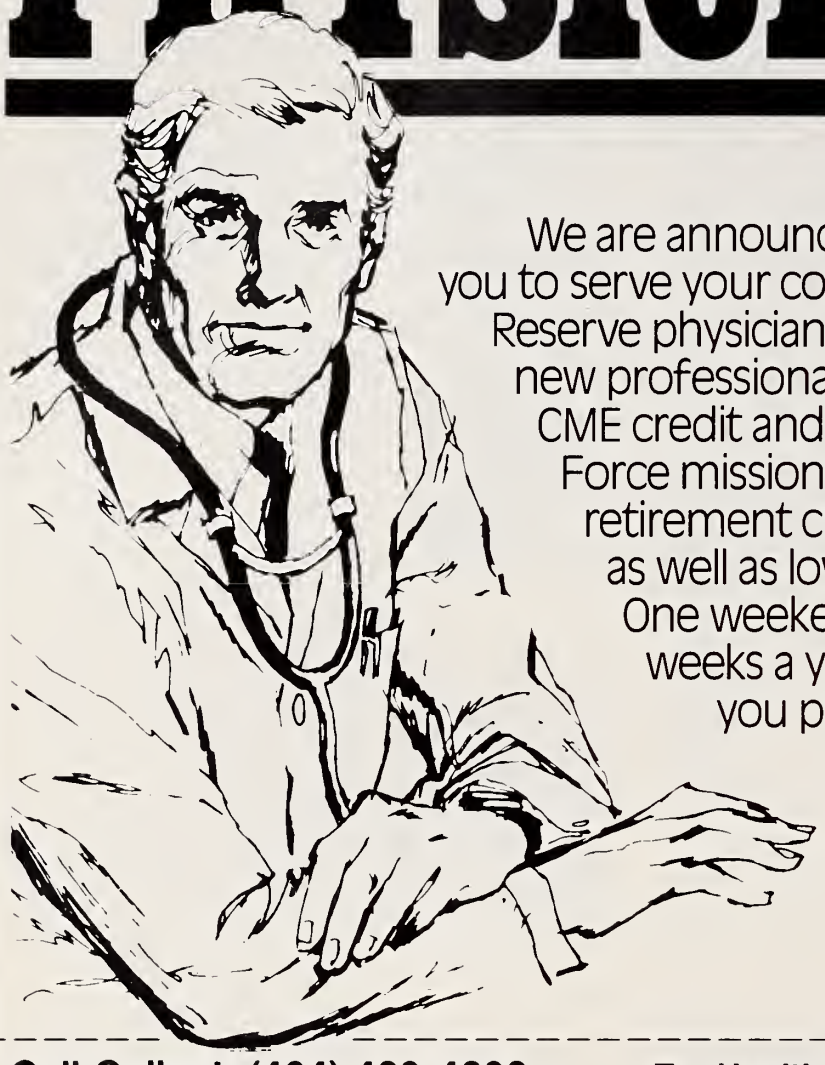
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1058

EVALUATION OF IMPAIRMENT/DISABILITY SECONDARY TO RESPIRATORY DISEASE

AMERICAN THORACIC SOCIETY

These recommendations apply equally to occupational and nonoccupational respiratory disease.

THE COMPONENT Committee for Disability Criteria of the American Lung Association has developed impairment/disability criteria in respiratory disease that would standardize assessment of respiratory impairment. These recommendations are intended to apply equally to occupational and nonoccupational respiratory disease.

A distinction has been made between the terms "impairment" and "disability," and the following definitions are presented:

Impairment: This is purely a medical condition. It reflects a functional abnormality that persists after appropriate therapy and with no reasonable prospect of improvement. If severe, it frequently precludes gainful employment. It is always a basic consideration in the evaluation of disability.

Disability: A term that indicates the total effect of impairment upon a patient's life. It is affected by such diverse factors as age, gender, education, economic and social environment, and energy requirements of the occupation.

The Committee believes that rating of health impairment falls within the province of a physician's expertise. Determination of disability is an administrative decision that requires consideration of nonmedical as well as medical variables.

This official American Thoracic Society (ATS) statement was adopted by the ATS Board of Directors, June, 1982. It was abstracted for the *Journal* by the Publications Committee, Georgia Thoracic Society, 1985. Send reprint requests to Gerald W. Staton, Jr., M.D., 35 Linden Ave., Atlanta, GA 30365.

Two people with an identical impairment may be differently affected in their life situations.

The Committee believes that rating of health impairment falls within the province of a physician's expertise. Determination of disability is an administrative decision that requires consideration of nonmedical as well as medical variables.

I. Identifying Pulmonary Impairment

A. Medical History

Although comprehensive, the history taking should particularly address the specific problems of pulmonary impairment.

1. Demographic and Clinical Information

a. Identification

Basic information includes name, address, social security number, telephone number, date and place of birth and residence, age, race, and gender.

b. Dyspnea

One of the manifestations of reduced lung function and impairment is shortness of breath. The degree of

dyspnea can be estimated by determining activities that provoke shortness of breath, i.e., distance walked, number of stairs climbed, etc. Dyspnea cannot be used as a sole criterion for evaluating impairment because the causes of dyspnea are multiple and complex, and individual responses to a given degree of dyspnea vary. Dyspnea should therefore be considered in combination with other clinical and physiologic factors.

c. Cough, Sputum Production

Although cough occurs frequently in patients with chronic obstructive pulmonary diseases (COPD), only some will meet the criteria of chronic bronchitis, i.e., cough productive of daily sputum for at least 3 months out of the year for 2 consecutive years without other apparent cause. Thus, a detailed description of sputum as to volume, color, odor, consistency, and when expectorated becomes important.

d. Wheezing

The hallmark of reversible airway obstruction is the wheeze. Wheezing is so common in asthma that it is frequently forgotten that "all that wheezes is not asthma." No discussion of wheezing is complete without a description as to frequency; occurrence during day, year; identification of causative factors; whether it limits one's capacity to function, etc.

e. Environmental Exposure and Chronologic Occupational Data

Public awareness of the dangers associated with certain occupations has increased in recent years. However, enough workers are not familiar with occupational hazards to justify traditional screening questions related to mining, rock drilling, sand blasting, etc. Job titles such as "plasterer," "fireman," or "engineer" may be of little value because official titles tend to remain the same while job activities and hazardous exposures may change dramatically as a result of the development of new technology.

A detailed history of employment background should be presented in chronologic order. In some cases, the spouse's job and exposure may be helpful. Finally the presence of pets, the use of forced air humidifiers, and the nature of hobbies should be determined.

f. Use of Tobacco

Subjects should be classified as nonsmokers (never smoked), exsmokers (stopped for at least 1 year), and present smokers. The history should include such information as age when the subject first started to smoke, if and when the use of cigarettes was discontinued, and an estimate of pack-years smoked. Maximal smoking levels should be determined.

B. Physical Examination

Physical examination should contain specific observations that will enable the reviewer to obtain an understanding of the claimant's respiratory problem:

1. General Description

Notation should be made as to the patient's position (standing, sitting, or supine) at the time blood pressure, heart, and respiratory rates are recorded. Height and weight should be noted. Do the following occur during inspiration: *en bloc* movement of the chest, use of sternocleidomastoid and other accessory muscles, paradoxical movement of the intercostal spaces posterolaterally and an attempt to elevate the chest cage by fixing the shoulders and leaning forward? Record the degree of thoracic muscle wasting, position, and extent of diaphragmatic motion as well as paradoxical movement between rib cage and the abdomen.

2. Description of the Patient's Breathing

Does the patient exhale through pursed lips? Depth of breathing, tachypnea, hyperpnea, labored breathing at rest, as well as the inability to complete sentences because of dyspnea should be recorded.

3. Cyanosis and Clubbing

In the presence of a normal hemoglobin concentration, cyanosis (central) involving the buccal mucosa and lips may not be seen until the arterial blood oxygen saturation is less than 75%. Clubbing is almost invariably absent in COPD but occurs when carcinoma of the lung, lung abscess, empyema, bronchiectasis, or asbestosis coexist.

4. Adventitious Lung Sounds

The character of lung sounds should be noted during quiet and deep breathing. The relative duration of expiration and inspiration as well as the intensity of breath sounds can provide valuable information concerning obstruction to air flow. Wheezing or rhonchi and crackles (rales) should be described as to intensity, location, and relationship within the respiratory cycle. Late inspiratory crackles may be present in two-thirds of patients with chronic interstitial disease such as asbestosis and desquamative interstitial pneumonia. Early inspiratory crackles may be heard in diseases of air flow obstruction and particularly in bronchiolitis obliterans.

5. Cor Pulmonale

The term cor pulmonale means pulmonary heart disease. If right heart failure accompanies cor pulmonale, neck vein distension occurs above the upper level of the manubrium sterni when the patient is lying supine. These veins fill from below, and their volume does not decrease when the thorax is elevated to a 45 degree angle from the horizontal. Dependent edema, increased hepatic size in the right midclavicular line, or both may confirm the existence of heart disease if these findings are not secondary to other causes. Not uncommonly along the left sternal border or over the epigastrium there is a right ventricular early diastolic gallop rhythm that tends to be increased on inspiration.

C. Chest Roentgenograms

Minimal radiographic examination should consist of posterior-anterior (PA) and lateral views taken on deep inspiration. Chest radiographic findings often correlate poorly with physiologic findings in diseases of airflow limitation such as asthma and emphysema. However, as part of the overall evaluation for impairment/

disability, the chest radiograph should be described in terms of hyperinflation, loss of vascular markings, presence of bullae, flattened diaphragms, increase in retrosternal airspace, sternophrenic angle, and PA diameter. Cardiac abnormalities or evidence of cor pulmonale should be noted.

The Committee believes that the recently revised international code (ILO 1980) for pneumoconiosis classification should be used in describing all types of diffuse interstitial lung disease.

II. Rating of Respiratory Impairment

A. Test Schema

The Committee recommends the following test schema for determining whether an individual is severely impaired by respiratory disease. References for methods of measurement and predicted values are in the list of selected references. (See text for further explanation.)

B. Selection of Tests

1. Forced Spirometry Measurements (Step I)

Three measurements of pulmonary function are included in this step, i.e., FVC, FEV1, and FEV1/FVC%. If the results recorded in *any* of the three measurements are below the lower "cut-off" limits, the individual is declared severely impaired, and no further pulmonary function testing should be requested.

The subjects should be evaluated after they have received optimum therapy and are at their optimal health condition. If wheezing or other evidence of bronchospasm is present at the time of the examination, the ventilatory studies should be repeated after the administration of a bronchodilator.

Height should be measured with the subject standing in his/her stocking feet. If subject cannot stand, or suffers from spinal deformities, height should be considered as equal to the arm span (maximal distance between the tips of the middle fingers when the arms are stretched out against the wall).

a. Forced Expiratory Volume in First Second (FEV1)

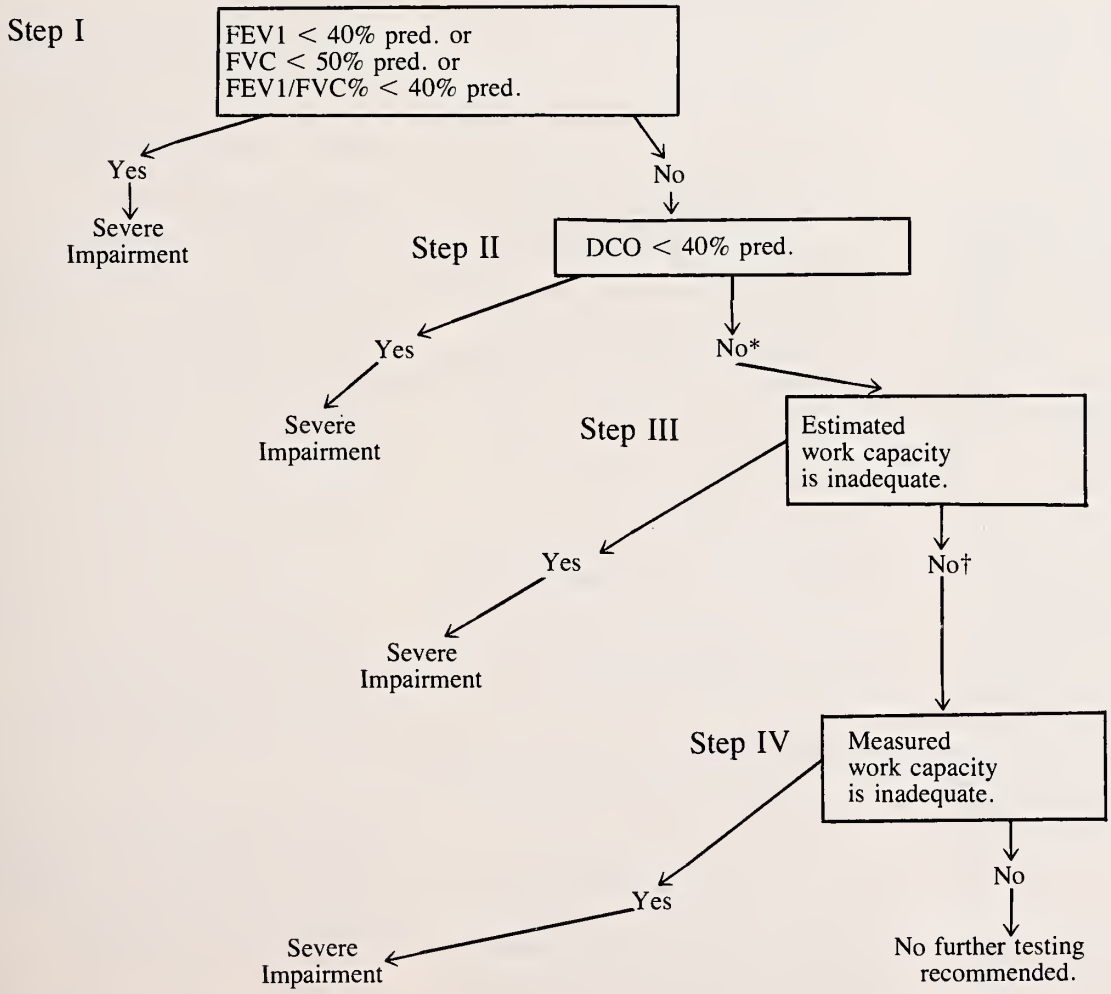
The measure should be made on the best spirogram recorded either pre- or post-bronchodilator. *If a subject has a FEV1 of 40% of predicted or less, this individual is eligible for a severe impairment rating.*

b. Forced Vital Capacity (FVC)

The FVC is measured along with the FEV1. *If a subject has a FVC of 50% of predicted or less, this individual is eligible for a severe impairment rating.*

c. FEV1/FVC Ratio Expressed as a Percentage

If a subject has a FEV1/FVC% of



* If FEV1, FVC, FEV1/FVC%, and DCO are normal, stop.
† Not sure, see text when step IV should be requested.

40% of predicted or less, this individual is eligible for a severe impairment rating.

2. Diffusing Capacity (DCO) (Step II)

The DCO single breath should be performed when respiratory complaints continue unabated in spite of forced spirometric measurement results above the cut-off limits.

If a subject has a DCO of 40% of predicted or less, this individual has severe impairment. .

3. Estimated Work Capacity (Step III)

Maximal oxygen uptake ($\dot{V}O2$) achieved during graded increments of exercise provides an objective measure of an individual's capacity to work. The $\dot{V}O2$ can be measured directly or estimated from power output generated during treadmill or ergometer exercise.

Work capacity studies are *not* recommended for individuals whose Steps I and II pulmonary function study results are either within normal limits or less than 40% predicted. The Committee, however, recommends the use of work capacity studies under the following circumstances:

- When the results of the Step I and II pulmonary function tests are above the severe impairment cut-off point or below normal limits, and the claimant states he/she is physically unable to meet the demands of a specific job because of breathlessness.
- When the claimant has not performed maximally or correctly in the Step I and II studies.

Exercise testing should not be performed on individuals who have medical contraindications in the opinion of the examining physician.

The Committee reviewed a number of articles and decided to follow the exercise testing procedure described by Jones in estimating the work capacity. The $\dot{V}O2$ is not measured directly but rather can be obtained once the power output (KPM/min) is determined.

An incremental work test using a cycle ergometer or treadmill is most commonly used to obtain the maximum power output. Because of a linear relationship between $\dot{V}O2$, heart rate, and ventilation, a concomitant rise in the latter two should be recorded during exercise. If maximal heart rate values are of the order of 210 (0.65 × years), the participant is probably being adequately stressed. On average, when the subjects are working up to about 85% of their maximal heart rate, they have reached 75% to 85% of the $\dot{V}O2$ max. A reduction in the maximum ventilatory capacity will also limit exercise capacity and exercise will cease at a $\dot{V}O2$ below the predicted maximum. In 1975, Spiro and associates presented this relationship for determining whether the maximum $\dot{V}O2$ is acceptable in the COPD patients by comparing the observed $\dot{V}E$ with the predicted ventilatory capacity which he calculated as follows:

$$\dot{V}E = (FEV1 \times 18.9) + 19.7$$

For normal subjects or patients with nonobstructive pulmonary defects, Jones finds that the maximum ventilation able to be sustained during four minutes of exercise is:

$$\dot{V}E = FEV1 \times 35$$

The Committee considers the claimant to be severely impaired if 30%-40% of his/her observed $\dot{V}O2$ max does not allow the claimant to meet the $\dot{V}O2$ costs of his/her occupational activities over an 8-hour period. If a $\dot{V}O2$ max of 15 ml/kg − min cannot be reached, the participant should be considered impaired for practically all types of labor.

4. Measured Work Capacity (Step IV)

Measured work capacity studies should be requested whenever one is not sure that the work capacity was properly recorded in the Step III study. The following could serve as a basis for doubt:

- Inappropriate changes observed in either the heart rate and/or minute ventilation.
- Subject unable to complete the test because of nonrespiratory symptoms, i.e., leg muscle fatigue, etc.
- Doubt about the predominant factor(s) responsible for the respiratory symptoms.

Step IV exercise protocol can be either that used by Jones or one the performing laboratory regularly uses. If the Jones approach is used, the subject will be studied in the steady state at rest and at one-third and two-thirds of the maximum power output obtained during the Stage III incremental work test. An arterial blood specimen obtained during exercise may provide additional valuable data concerning pulmonary gas exchange.

The definition of severe impairment is the same as presented for Step III.

5. Arterial Blood Gases

Abnormal arterial blood gas values can be a partial reflection of chronically impaired lung function. For the obstructive lung diseases, the FEV1 correlates better with an ability to work than the resting PaO2 level. The Committee does not recommend arterial blood gases for initial screening. If hypoxemia is suspected, these studies can be utilized at Step III or IV of the evaluation.

The diagnosis provides a means to decide upon the type of evidence necessary to describe impairment and the form of examination and laboratory procedures necessary for diagnosis.

An individual is impaired if he/she is in a stable condition, is receiving optimal medical therapy, and meets either of the following criteria:

(1) Resting arterial PO2 < 55 mmHg while breathing room air

or

(2) Resting arterial PO2 < 60 mmHg while breathing room air together with evidence of one or more of the secondary conditions related to arterial hypoxemia including:

- Pulmonary hypertension as determined by cardiac catheterization.

- Cor pulmonale as exhibited by electrocardiographic and chest radiographic changes.
- Increasing severity of hypoxemia as noted by blood samples from an indwelling arterial cannula or by the ear oximeter while exercising on a treadmill for no more than 6 minutes at 2 mph, zero% grade.
- Erythrocytosis confirmed by complete blood count, and if necessary, the use of radioactive nuclides to measure red blood cell mass and plasma volume.

The values for arterial PO2 in these guidelines should be appropriately adjusted to reflect the altitude at which the blood specimen is obtained. Hypoxemia must be documented on two occasions with an interval between observations of at least 4 weeks because many patients will improve significantly during this time when receiving optimal medical care.

III. Special Considerations When Interpreting and Reporting Findings

A. Applicant Severely Impaired by Asthma

An asthmatic is considered severely impaired if carefully documented severe attacks of bronchospasm requiring emergency treatment by a physician occur at least once every 2 months or on an average of at least 6 times per year despite therapy judged as optimum by a specialist in respiratory disease. The claimants should have prolonged expiration with wheezing or rhonchi between attacks to meet criteria established by the Social Security Administration.

B. Applicant Not Properly Diagnosed and/or Treated

The name or diagnosis given to the symptoms or syndrome that the medical profession accepts as evidence of ill health has importance for purposes of impairment/disability evaluation. The diagnosis provides a means to decide upon the type of evidence necessary to describe impairment and the form of examination and laboratory procedures necessary for diagnosis. Clearly, if an earlier diagnosis is incorrect, the examiner should submit the correct diagnosis.

C. Applicant Refuses or Has Not Received Commonly Accepted Regimen of Therapy

By definition, regardless of the reason(s) given, decisions concerning severe impairment should not be made until after appropriate therapy and only when there appears to be a reasonable prospect of no further improvement. If the participant is not being treated or has refused therapy generally considered likely to improve the claimant's condition, this should be recorded.

D. Applicant Has Coexisting Diseases

When two disease processes coexist, it is important to present a separate evaluation for each diagnostic entity and indicate the major impairing condition. The examination should be sufficiently detailed in order that this distinction can be made. Although each disease by itself may not be disabling, the sum of the disorders may be.

E. Applicant's Refusal or Inability to Cooperate During Examination

If there is an unreasonable refusal or inability on the part of the claimant to cooperate in the performance of the requested studies, this should be recorded.

F. Applicant Deconditioned

A state of poor conditioning should be described when the level of impairment is primarily attributable to a deconditioned state resulting from illness, recent hospitalization, physical inactivity, obesity, malnutrition, etc.; this fact(s) should be recorded, and retesting after appropriate remedial action should be recommended.

G. Applicant Beyond Retirement Age

Retirement age is irrelevant in determining cardiopulmonary impairment, but is important in a disability evaluation. Established procedures prevail for anyone referred for an evaluation.

H. Death Cases

Whenever possible, obtain all medical evidence, including the death certificate, that may help in the determination of impairment and/or disability. The death certificate by itself is never sufficient.

I. Applicant Has Disability Without Impairment

Just as impairment can exist without disability, the reverse is true. Tuberculosis, bronchiectasis, sleep apnea (alveolar hypoventilation syndrome) are examples whereby disability can exist without measurable lung function impairment.

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Systolic Hypertension Therapy Trial at Emory . . . Volunteers Needed

The Emory University School of Medicine is one of 17 medical centers nationwide participating in a clinical trial to determine, among other things, whether antihypertensive therapy for isolated systolic hypertension (ISH) reduces the incidence of stroke.

Once thought to be a benign and even inevitable sign of aging, ISH is now recognized as a potent, but potentially modifiable, risk of cerebrovascular disease.

In a pilot study conducted from 1980 to 1983, and funded by the National Heart, Lung and Blood Institute, the National Institute on Aging, and the National Institute of Mental Health, investigators reported that drug treatment could lower isolated systolic hypertension and that compliance with drug regimens and clinic visits were high (Int J Mental Health 1982;11:76-97). The National Heart, Lung and Blood Institute estimates that more than 3 million persons over age 60 have isolated systolic hypertension. This is defined as a systolic reading of 160 mm Hg or above with a diastolic reading below 90 mmHg.

Systolic blood pressure fluctuates widely in some elderly patients, and approximately half of this group has isolated systolic hypertension as established by repeated measurements. These persons have a threefold excess risk of stroke, other cardiovascular diseases and death, according to the Framingham Study (Circulation 1980;61:1179-1182).

The Systolic Hypertension in the Elderly Program (SHEP) is a 5-year clinical trial to be conducted in a double blind fashion. Those receiving active drugs will receive chlorthalidone beginning at 12.5 mg and increased to 25 mg a day. If necessary, atenolol at 25 to 50 mg a day will be a second-step drug. In patients who are intolerant to beta-blockers, reserpine is an alternative drug, in low doses of 0.05 to 0.10 mg a day. The Emory program is seeking 300 volunteers for the project. Initial criteria are that the volunteer must be at least 60 years of age, have systolic hypertension, and otherwise be in good health.

Thus far, approximately 2,000 age-eligible persons have been screened in the Atlanta area. Please contact the Emory-SHEP clinic at 589-5021 for further information, or contact W. Dallas Hall, M.D., SHEP Principal Investigator at 404-589-4494 (Atlanta). ■

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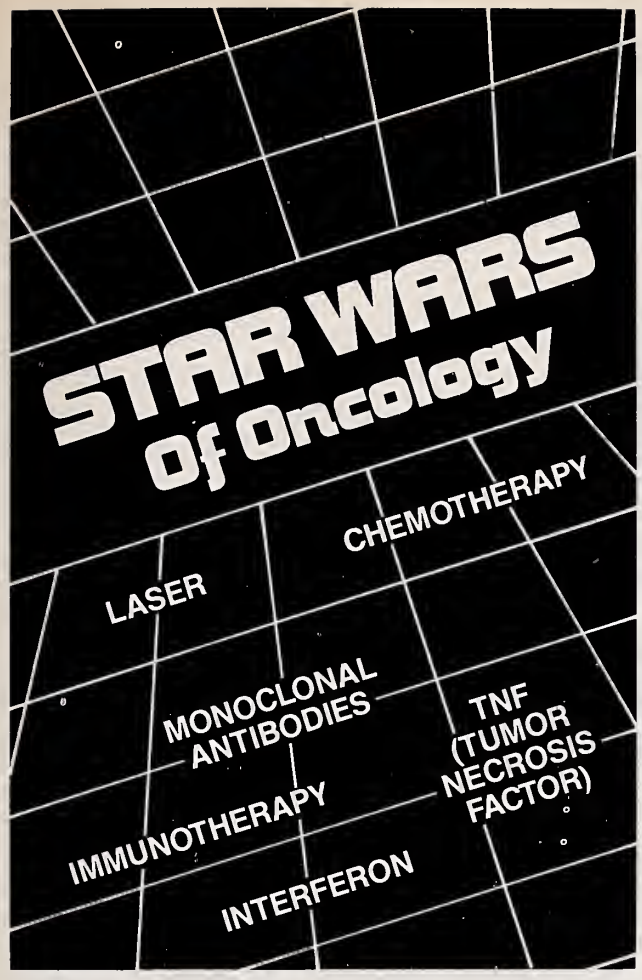
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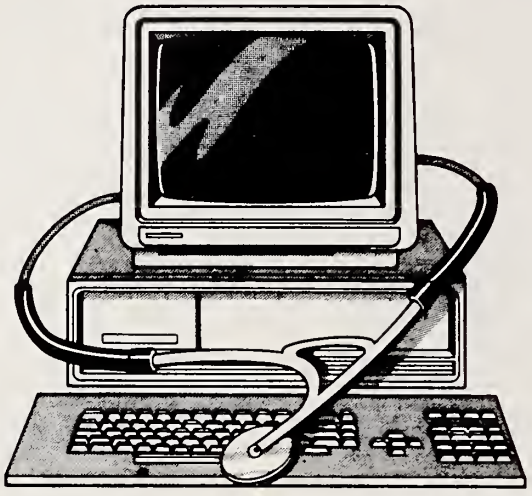
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Service and Rehabilitation

James W. Keller, M.D.

The Service and Rehabilitation Program of the American Cancer Society is an important aspect of the cancer control program available in county units of the Society. Enlarging the scope of Service and Rehabilitation is consistent with the progress made in cancer control in recent years. More patients are surviving for longer periods of time. There is greater understanding of the psychosocial needs of cancer patients and their families. The volunteers of the Society working in every community across the United States can bring the special caring that makes a difference in helping individuals and families successfully cope with the over 100 diseases collectively called cancer.

To achieve the strongest Service and Rehabilitation Program, each unit is urged to develop basic programs before instituting additional approved Service and Rehabilitation Programs. The following are the basic Programs:

I. *Information and Guidance Services*

This program utilizes community listings of American Cancer Society and local services by providing referral to such services as transportation, psychosocial support, home care, visiting nurse groups, financial resources, etc. Trained American Cancer Society volunteers provide the basis for referral and resource management for the cancer patients and their family members.

II. *Home Care Items*

This service provides necessary and useful home items for cancer patients, other supplies and equipment, dressings, and gifts for the care and comfort of the patients.

III. *Transportation Service*

American Cancer Society units assist in the transport of cancer patients to and from treatment. This service is best provided by trained volunteers of the Road to Recovery program. Limited reimbursement is available for patients.

IV. *Patient Education*

This service is defined as patient and family education through established group education programs and the distribution of pamphlets, booklets, and audiovisual presentations to assist in the understanding of the disease and its management. Group programs such as "I CAN COPE" provide information on cancer therapy, treatment, side effects, nutrition, resource availability, and other topics of interest to the cancer patient and family.

V. *Rehabilitation*

These services are defined as those which assist patients to return to their communities, occupations, and families and which help them function at as normal or near normal capacity as possible. Rehabilitation includes patient referral to obtain help through community groups. The Society recognizes the importance of the psychosocial needs of cancer patients and their families. Through its service and rehabilitation activities, the Society seeks to increase the coping skills of persons affected by cancer. Physician approval is required for visits to hospitalized patients.

A. Reach to Recovery

The Reach to Recovery Program is designed to assist the woman who has or has had breast cancer. Volunteers who have had breast cancer and who have been carefully selected and trained visit the patient in the hospital before and/or after surgery to assist in functional, emotional, and social rehabilitation of the patient. Assistance in the selection of prostheses, and reassurance on a woman-to-woman basis is offered to women after mastectomy. Specialized services are available for women requesting information about breast reconstruction and newer options in breast cancer management.

Dr. Keller is with the Division of Hematology/Medical Oncology at Emory University School of Medicine.

Prepared at the request of the Georgia Division, American Cancer Society. Others wishing to contribute papers to the Page are invited to contact T. Gray Fountain, M.D., Cancer Page Editor, 910 N. Jefferson, Albany, GA 31708.

B. Ostomy Patient Rehabilitation

The Ostomy Patient Rehabilitation Program is designed to assist the person with an ostomy. The program will provide visits from trained volunteers who have successfully adjusted to ostomy surgery. They offer help on a one-to-one basis. Local ACS Units cooperate with local United Ostomy Association chapters in providing ostomy visiting services and support in other chapter activities. Local chapters work closely with enterostomal therapists who assist in the physical and psychological rehabilitation of the ostomy patient.

C. Laryngectomy Patient Rehabilitation

The Laryngectomy Patient Rehabilitation Program is designed to assist the person with a laryngectomy. Laryngectomy visitors provide pre- and/or post-operative support to the new patient. Speech lessons may be included as part of the American Cancer Society program using speech pathologists and/or trained lay teachers. The rehabilitation clubs of the International Association of Laryngectomees (IAL) play an important role in the rehabilitation of laryngectomy patients.

D. Self-Help and Support Groups

Self-help groups are defined as groups of patients and/or families who meet under the leadership of a trained lay volunteer who has had training as a group facilitator. A health professional advisor is desirable.

Support groups are defined as patients and/or families meeting under the leadership of a professional: a psychologist, nurse, social worker, other professional counselor, or physician. Some Units provide and support group meetings for cancer patients and/or their families to assist in coping with cancer.

There will be 870,000 new cases of cancer diagnosed in Georgia in 1985, according to American Cancer Society statistics. In addition, more than 28,000 Georgians will be under medical care for cancer. In 1985, nearly one in two cancer patients can expect to be cured. Cancer patients and their families face a variety of problems in overcoming cancer; fortunately, cancer doesn't have to be faced alone. Helping cancer patients and their families learn to live with cancer is embodied in the American Cancer Society's Service & Rehabilitation Program. ■

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CEPHALOSPORINS MADE EASY

JOHN A. DRUMMOND, M.D.

Antibiotic selection has become a highly complex part of medical practice.

SINCE THE INTRODUCTION of cephalothin (Keflin) in 1964, the prescribing of cephalosporin antibiotics has practically evolved into a science unto itself. When Keflin was first introduced by Eli Lilly & Company, it was hailed as a safe, effective, broad spectrum parenteral antibiotic. Given intravenously on a q.6 h. dosing schedule, Keflin proved to be highly effective against streptococci, staphylococci, and a moderate number of community-acquired gram-negative bacteria. The addition of cefazolin (Kefzol — Lilly; Ancef — Smith Kline & French) in 1973 offered the same antimicrobial activity, but improved pharmacokinetics. Because of the higher serum level and longer half-life, Kefzol/Ancef q.8 h. proved as effective (but considerably cheaper) as Keflin q.6h.

Several second-generation cephalosporins were developed, each offering additional unique advantages. Cefamandole (Mandol — Lilly) covered a broader range of gram-negative organisms (including strains of *Hemophilus, Enterobacteriaceae,* and *Proteus*) which were resistant to the first-generation drugs. The antibacterial spectrum of cefuroxime (Zinacef — Glaxo) is similar to q.6h. Mandol, but with improved pharmacokinetics, allowing for a q.8h. dosing schedule. Cefoxitin (Mefoxin — Merck) added anaerobes (especially *Bacteroides fragilis*) and gonococci to its antibacterial spectrum, but proved to be less effective against staph than Keflin or Kefzol/Ancef.

Nosocomial methicillin-resistant S. epidermis *strains are usually not sensitive to cephalosporins and require intravenous vancomycin for effective treatment.*

The newest member of second-generation cephalosporins is cefonicid (Monocid — Smith, Kline & French), which boasts an antibacterial spectrum similar to that of Mandol. The half-life of Monocid is 6-10 times that of Mandol, so the typical dosing schedule is 1-2 grams IV or IM q.24h., as opposed to q.6h. for Mandol. However, it should be noted that some strains of staph are not quite as sensitive to Monocid as measured by comparative minimal inhibitory concentrations. The longer half-life of Monocid makes it an appealing drug for surgical prophylaxis and for outpatient treatment of chronic infections, e.g. osteomyelitis.

Perhaps the greatest confusion concerns the third-generation compounds. While these newer products offer some clear advantages over first and second-generation drugs (increased activity against gram-negative rods), there are also limitations to be considered. Activity against staph is inferior to older cephalosporins, and gram-negative activity is often less predictable than for the aminoglycosides. Additionally, all third-generation cephalosporins are considerably more expensive per gram prescribed.

Moxalactam (Moxam — Lilly), cefoperazone (Cefobid — Roerig) and ceftizoxime (Cefizox — Smith, Kline & French) have relatively long half-lives and may be given on a q.8-12h. dosing schedule. Cefotaxime (Claforan — Hoechst) has a shorter half-life and should usually be administered q.6h. (perhaps q.4h. for serious infections). Ceftriaxone (Rocephin — Roche) has the longest half-life of any currently available

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cephalosporin at approximately 6-9 hours; thus it may be administered only once daily, similar to the second-generation Monocid. Most third-generation drugs are excreted primarily by the kidney, with Cefobid standing out as a notable exception. Cefobid is primarily eliminated by the liver and therefore does not require dosage adjustment in patients with renal insufficiency.

All of the third-generation drugs penetrate the cerebrospinal fluid well and are quite effective in the treatment of gram-negative bacillary meningitis. These antibiotics are also useful in the treatment of serious infections due to *H. influenzae,* including meningitis.

Though the third-generation drugs are generally more active against aerobic gram-negative rods, one cannot assume efficacy regarding *Pseudomonas*. The physician should always include an aminoglycoside (gentamicin, tobramycin, amikacin, or netilmicin) in the treatment of *Pseudomonas* infections until M.I.C. testing confirms sensitivity to a specific cephalosporin. At Piedmont Hospital in Atlanta, over 90% of *Pseudomonas* isolates are sensitive to Cefobid, but only 45% are sensitive to Claforan.

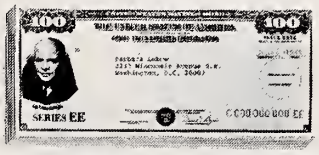
Since no cephalosporin is highly active against group D enterococcus *(S. faecalis)* or *Candida,* one should be wary of supra-infections with these organisms. Nosocomial methicillin-resistant *S. epidermidis* strains are usually not sensitive to cephalosporins and require intravenous vancomycin for effective treatment.

Certain limitations must be carefully considered when prescribing third-generation cephalosporins. Activity against staph is clearly inferior to Keflin, Kefzol/Ancef, Mandol, and Monocid. Therefore, these third-generation antibiotics are not generally indicated for surgical prophylaxis. Their anaerobic activity is not superior to Mefoxin, a cheaper second-generation product. Extended use in seriously ill patients can be associated with bleeding by prolongation of prothrombin time (most commonly observed with Moxam). Antabuse-like reactions occasionally occur when alcohol is consumed during, or up to 48 hours after, a course of treatment.

In conclusion, antibiotic selection has become a highly complex part of medical practice with a major impact on cost of care. An audit of our pharmacy reveals that the triumvirate of Kefzol/Ancef, Mandol, and Mefoxin accounts for *over 15% of total pharmacy charges* to Piedmont Hospital patients. This brief review will hopefully alleviate some of the confusing issues regarding cephalosporin use and promote more prudent prescribing.

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PERSONALS

First District

General surgeon **R. Lester Neville, M.D.,** has retired after 57 years of practice in the Savannah area. The 83-year old Statesboro native moved to Savannah in 1930 and established himself as a surgeon and family practitioner. In 1982, he decided to devote all of his time to his general practice. Dr. Neville graduated from the University of Georgia and the Medical College of Georgia.

Second District

William F. Hogan, Jr., M.D., family practitioner, has gone into private practice in Thomasville. Dr. Hogan has worked in the Archbold Memorial Hospital emergency room for the past two years.

Third District

The Georgia Academy of Family Physicians honored **John Aicher, M.D.,** of Columbus, as Family Resident of the Year. Dr. Aicher is Co-Chief Resident in Family Practice at the Medical Center of Columbus. This award was established by the Georgia Academy 4 years ago to show appreciation to the family practice residents who demonstrate excellence and a commitment to family medicine.

Fifth District

Elizabeth W. Nugent, M.D., associate professor of pediatrics (cardiology) at Emory University School of Medicine, was elected medical vice president of the American Heart Association — Georgia Affiliate.

Sixth District

Robert B. Copeland, M.D., of LaGrange is the new president of the American Heart Association — Georgia Afiliate. Dr. Copeland is president of Southern Cardiovascular Associates and director of the Georgia Heart Clinic in LaGrange. He is clinical professor of medicine at Emory University and clinical professor of medicine-cardiology at the University of Alabama in Birmingham.



Obstetrics-gynecology specialist **K. Dean Burke, M.D.,** has opened a practice in Bainbridge and has joined the Bainbridge Memorial Hospital medical staff.

Seventh District

D. Scott MacLeod, M.D., a cardiologist at the Harbin Clinic in Rome, was named president-elect of the American Heart Association — Georgia Afiliate.

Newly elected officers of the Kennestone Hospital medical staff are **Clem Doxey, Jr., M.D.** (dermatologist), president; **Peter Re, M.D.** (neurologist), vice president; and **Bricker Burns, M.D.** (radiologist), secretary.

Windy Hill Hospital's new officers are **Gerald Goldklang, M.D.** (internist), chief of staff; **Robert Wener, M.D.** (ophthalmologist), chief of staff-elect; and **Ronald Kaplan, M.D.** (general surgeon), secretary.

General surgeon, **John de Albuquerque, M.D.,** has moved his practice from Marietta to Dallas, Georgia. Dr. Albuquerque has been in private practice in Georgia since 1970.

Ninth District

Ned M. Franco, M.D., a urologist, has opened an office in Cumming. Dr. Franco has been in practice since 1969, serving on the staff of several metropolitan Atlanta hospitals including Northside, St. Joseph's, and Shallowford Community Hospital.

Obstetrician/gynecologist, **Phillip N. Bannister, M.D.,** has been named to the Gwinnett Hospital System medical staff. Dr. Bannister had been practicing in Toccoa.

DEATHS

A. G. Hendrick

Family practitioner, A. G. Hendrick, M.D., of Perry, died July 20 after 43 years of practice. He was educated at Emory University and completed his post-graduate work at John Hopkins University. He was a former medical examiner for Houston County and former chief of staff at the Perry-Houston County Hospital. He received the 50-year Medical Award for Outstanding Service to Mankind by the Houston County Hospital Authority in 1979, the Book of Golden Deeds by the Perry Exchange Club, the Liberty Bell Award by the Houston County Bar Association, the Man of the Year Award by the Kiwanis in 1958 and 1970, and an award of appreciation for his service to the black community in 1983.

Edward Kenneth Munn

Edward Kenneth Munn, M.D., 86, a retired obstetrician/gynecologist from Columbus, died July 12. Dr. Munn attended the University of Georgia and completed his education at the University of Tennessee Medical School in Memphis. He served his internship at the Chicago Lying-In Hospital and practiced medicine in Kentucky and West Virginia before returning to Columbus in 1944.

Survivors include two daughters, two brothers, four grandchildren, and four greatgrandchildren.

—Association News—

Enrique Mayo-Rojas

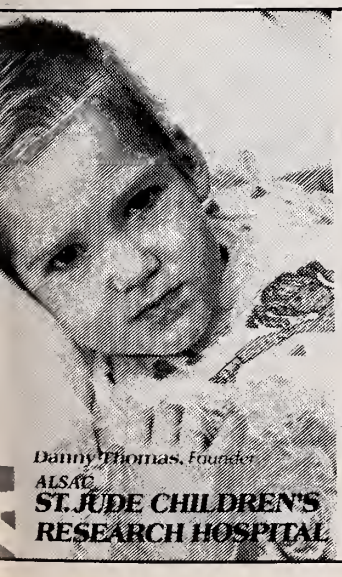
Enrique Mayo-Rojas, M.D., 42, a Columbus specialist in cardiovascular disease, died June 23. Dr. Mayo-Rojas was a native of Puerto Rico. He received his undergraduate degree from the University of Puerto Rico in Rio Piedras and attended medical school at the University of Salamanca in Salamanca, Spain. He practiced at hospitals throughout Puerto Rico until 1979, when he joined the staff at Martin Army Community Hospital at Fort Benning. He served as Martin Army's chief of cardiology from August 1980 through July 1981 and had practiced at the Medical Center and St. Francis Hospital since 1983.

Dr. Mayo-Rojas is survived by his wife, two daughters, two sons, two sisters, three brothers, and his mother.

Carlos Roberto Triana

General surgeon, Carlos Roberto Triana, M.D., 54, of Patterson died June 25. A native of Cuba, he had practiced medicine in Patterson since 1962. He was a graduate of the University of Havanna Medical School. He served his internship in Steubenville, Ohio and at the Crawford W. Long Hospital. While in Atlanta, he served a 3-year residency in surgery and was chief resident in surgery, an honorary title for the first foreign student. He then served a 3-year fellowship in surgery at Central State Hospital. Dr. Triana was a member of a number of associations including: the Pan-Pacific Surgery Congress, the Abdominal Surgical Association, American College of Utilization Review Physicians, and Certified Surgical Board. He was a Fellow of the American Academy of Family Practice and the American College of Surgeons. He was a member of the Medical Care Foundation and delegate to the Georgia Academy of Family Practice.

Survivors include his wife, his mother, two daughters, and three sisters.



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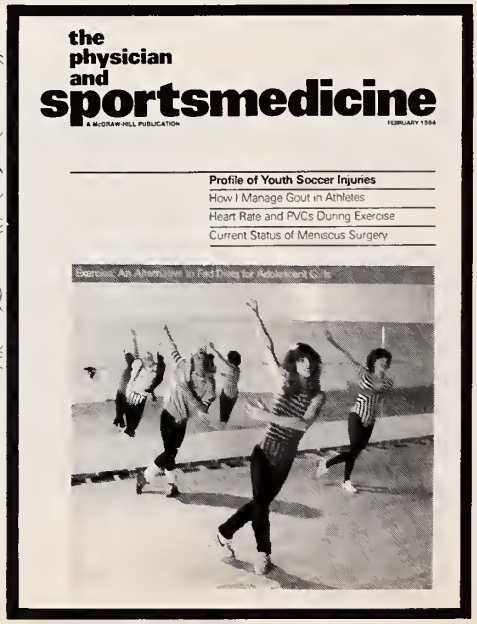
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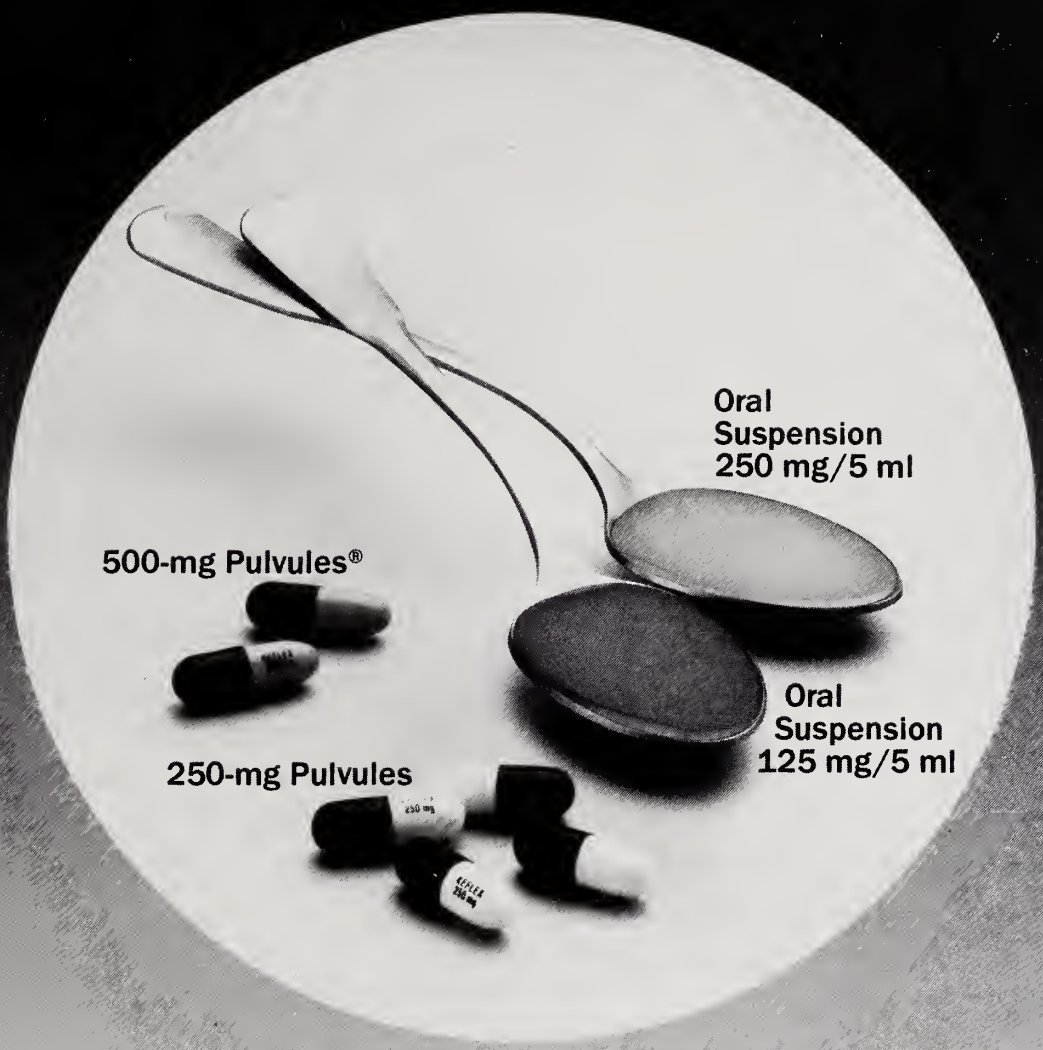
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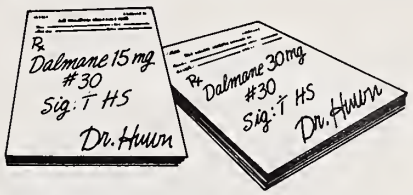
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The sublingual and chewable forms of the drug are indicated for acute prophylaxis of angina pectoris when taken a few minutes before situations likely to provoke anginal attacks. Because of a slower onset of effect, the oral forms of isosorbide dinitrate are not indicated for acute prophylaxis.

CONTRAINDICATIONS: SORBITRATE is contraindicated in patients who have shown purported hypersensitivity or idiosyncrasy to it or other nitrates or nitrites. Epinephrine and related compounds are ineffective in reversing the severe hypotensive events associated with overdose and are contraindicated in this situation.

WARNINGS: The benefits of SORBITRATE during the early days of an acute myocardial infarction have not been established. If one elects to use organic nitrates in early infarction, hemodynamic monitoring and frequent clinical assessment should be used because of the potential deleterious effects of hypotension.

PRECAUTIONS: General: Severe hypotensive response, particularly with upright posture, may occur with even small doses of SORBITRATE. The drug should therefore be used with caution in subjects who may have blood volume depletion from diuretic therapy or in subjects who have low systolic blood pressure (eg, below 90 mmHg). Paradoxical bradycardia and increased angina pectoris may accompany nitrate-induced hypotension. Nitrate therapy may aggravate the angina caused by hypertrophic cardiomyopathy.

Marked symptomatic, orthostatic hypotension has been reported when calcium channel blockers and organic nitrates were used in combination. Dose adjustment of either class of agents may be necessary.

Tolerance to this drug and cross-tolerance to other nitrates and nitrites may occur. Tolerance to the vascular and antianginal effects of isosorbide dinitrate or nitroglycerin has been demonstrated in clinical trials, experience through occupational exposure, and in isolated tissue experiments in the laboratory. The importance of tolerance to the appropriate use of isosorbide dinitrate in the management of patients with angina pectoris has not been determined. However, one clinical trial using treadmill exercise tolerance (as an end point) found an 8-hour duration of action of oral isosorbide dinitrate following the first dose (after a 2-week placebo washout) and only a 2-hour duration of effect of the same dose after 1 week of repetitive dosing at conventional dosing intervals. On the other hand, several trials have been able to differentiate isosorbide dinitrate from placebo after 4 weeks of therapy and, in open trials, an effect seems detectable for as long as several months.

Tolerance clearly occurs in industrial workers continuously exposed to nitroglycerin. Moreover, physical dependence also occurs since chest pain, acute myocardial infarction, and even sudden death have occurred during temporary withdrawal of nitroglycerin from the workers. In clinical trials in angina patients, there are reports of anginal attacks being more easily provoked and of rebound in the hemodynamic effects soon after nitrate withdrawal. The relative importance of these observations to the routine, clinical use of isosorbide dinitrate is not known. However, it seems prudent to gradually withdraw patients from isosorbide dinitrate when the therapy is being terminated, rather than stopping the drug abruptly.

Information for Patients: Headache may occur during initial therapy with SORBITRATE. Headache is usually relieved by the use of standard headache remedies or by lowering the dose and tends to disappear after the first week or two of use.

Drug Interactions: Alcohol may enhance any marked sensitivity to the hypotensive effect of nitrates.

Isosorbide dinitrate acts directly on vascular smooth muscle; therefore, any other agent that depends on vascular smooth muscle as the final common path can be expected to have decreased or increased effect depending on the agent.

Carcinogenesis, Mutagenesis, Impairment of Fertility: No long-term studies in animals have been performed to evaluate the carcinogenic potential of this drug. A modified two-litter reproduction study in rats fed isosorbide dinitrate at 25 or 100 mg/kg/day did not reveal any effects on fertility or gestation or any remarkable gross pathology in any parent or offspring fed isosorbide dinitrate as compared with rats fed a basal-controlled diet.

Pregnancy Category C: Isosorbide dinitrate has been shown to cause a dose-related increase in embryotoxicity (increase in mummified pups) in rabbits at oral doses 35 and 150 times the maximum recommended human daily dose. There are no adequate and well-controlled studies in pregnant women. SORBITRATE should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers: It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when SORBITRATE is administered to a nursing woman.

Pediatric Use: The safety and effectiveness of SORBITRATE in children has not been established.

ADVERSE REACTIONS: Adverse reactions, particularly headache and hypotension, are dose-related. In clinical trials at various doses, the following have been observed:

Headache is the most common (reported incidence varies widely, apparently being dose-related, with an average occurrence of about 25%) adverse reaction and may be severe and persistent. Cutaneous vasodilation with flushing may occur. Transient episodes of dizziness and weakness, as well as other signs of cerebral ischemia associated with postural hypotension, may occasionally develop (the incidence of reported symptomatic hypotension ranges from 2% to 36%). An occasional individual will exhibit marked sensitivity to the hypotensive effects of nitrates and severe responses (nausea, vomiting, weakness, restlessness, pallor, perspiration, and collapse) may occur even with the usual therapeutic dose. Drug rash and/or exfoliative dermatitis may occasionally occur. Nausea and vomiting appear to be uncommon. Case reports of clinically significant methemoglobinemia are rare at conventional doses of organic nitrates. The formation of methemoglobin is dose-related and, in the case of genetic abnormalities of hemoglobin that favor methemoglobin formation, even conventional doses of organic nitrate could produce harmful concentrations of methemoglobin.

DOSAGE AND ADMINISTRATION: For the treatment of angina pectoris, the usual starting dose for sublingual SORBITRATE is 2.5 to 5 mg; for chewable tablets, 5 mg; for oral (swallowed) tablets, 5 to 20 mg, and for controlled-release forms, 40 mg.

SORBITRATE should be titrated upward until angina is relieved or side effects limit the dose. In ambulatory patients, the magnitude of the incremental dose increase should be guided by measurements of standing blood pressure.

The initial dosage of sublingual or chewable SORBITRATE for prophylactic therapy in angina pectoris patients is generally 5 or 10 mg every 2 to 3 hours. Adequate controlled clinical studies demonstrating the effectiveness of chronic maintenance therapy with these dosage forms have not been reported.

SORBITRATE in oral doses of 10 to 40 mg given every 6 hours or in oral controlled-release doses of 40 to 80 mg given every 8 to 12 hours is generally recommended. The extent to which development of tolerance should modify the dosage program has not been defined. *The oral controlled-release forms of isosorbide dinitrate should not be chewed.*

DOSAGE FORMS AVAILABLE: Sublingual Tablets (2.5, 5, 10 mg); Chewable Tablets (5, 10 mg); Oral Tablets (5, 10, 20, 30, 40 mg); Sustained Action Tablets (40 mg).

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See preceding page for brief summary of prescribing information.

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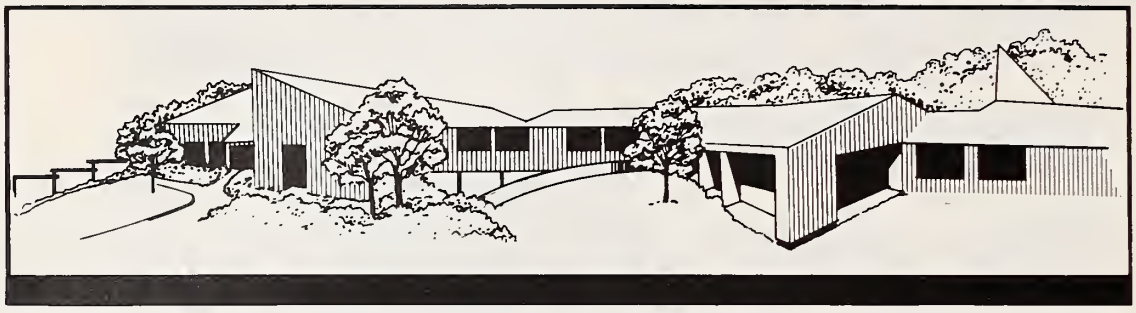
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THE COVER

October is Family Health Month, and in this issue of the *Journal* we salute the family practitioner. Read Drs. Shannon and Peterson's article on p. 688 and Dr. Morley's editorial on p. 685 to see why the family practitioner remains an integral part of the medical profession.

Photo and design by Chuck Rogers, Atlanta.

Incidental Intelligence . . .

DMA (Medicaid) Expanded Coverage & Increased Maximum Allowances for Certain Procedures

Effective October 1, 1985, the DMA will have expanded eligibility coverage for the following groups of medically needy pregnant women and children:

1. Pregnant women in deprived households whose income and resources do not exceed medically needy levels (January, 1985).
2. Children up to age 18 in deprived households whose income and resources do not exceed medically needy levels (January, 1985).
3. Pregnant women in intact households where the principal breadwinner is unemployed, and the family's income and resources are below medically needy levels (April, 1985).
4. Children born on or after October 1, 1983, in intact households (either two parent households or relatives) whose income and resources do not exceed medically needy levels (April, 1985).
5. Pregnant women in intact households whose income and resources are below medically needy levels (October, 1985).
6. Children up to age 18 in intact households whose income and resources are below medically needy levels (October, 1985).

Also, the DMA will increase the maximum allowance payable to physicians for certain obstetrical procedures by 10%; newborn care in hospitals, 20%; and office visits for new patients, 90015 — 13%; 90017 — 20%; and 90020 — 16%. They also are proposing a 12% increase in total expenditures for physician services in their FY 87 budget (effective 1 July 1986). We hope these positive steps taken by the DMA will enable more physicians to participate in the Medicaid Program.

M&I Infant Mortality Resource Document

There are so many problems and possible interventions related to Georgia's consistently high infant mortality rate that the Task Force convened by the MAG through the MAG Maternal & Infant Health Committee decided to develop a resource document to help local people address local problems.

This document is the result of over a year's study of a vast amount of information including statistical data, available resources for medical care, educational material for local school systems, and a description of special projects developed in the local health departments and volunteer agencies.

It has been distributed to all county medical society presidents, and the organizations involved in its development suggested that a committee be appointed to review it and identify specific activities that would address various community needs.

It is available to other interested parties. Contact Joyce Butler at MAG Headquarters at (404) 876-7535 or 1/800/282-0224.

The AMA Market Area Profile (Map) Service

The American Medical Association has announced a new activity that will be of interest to any physician who is interested in developing or modifying a medical practice. The AMA MARKET AREA PROFILE (MAP) SERVICE, created as a part of th Association's Competition Action Plan, is designed to assist physicians in establishing and maintaining a successful medical practice by providing them with detailed demographic and health resource data on an existing or planned practice site.

The MAP Service offers physicians individualized, computer-generated data profiles on any area in the United States. Each Market Area Profile consists of 6 data reports:

- The *Area Profile Report* — 1980 census data (e.g., population, age, sex, housing, occupation, income, etc.) for the area that the physician has selected.
- The *State Area Profile Report* — 1980 census data for the state in which the physician-selected area is located, provided for comparison purposes.
- The *Demographic Trends Report* — 1980, current year, and 5 year projected population and demographic data (e.g., population, age, sex, household size, etc.).
- The *State Demographic Trends Report* — A Trends report for the state in which the selected area is located, provided for comparison purposes.
- The *Physician Report* — Statistical information on the number of physicians in the area, by medical specialty, age, and major professional activity.
- The *Hospital Report* — Detailed information on hospitals in the selected area, including: number of beds; admissions, utilization and census figures; facilities and services; and a profile of the medical staff. (If there are more than four hospitals in the selected area, a summary listing of the hospitals is provided instead.)

The information provided in a MAP profile can be beneficial to all physicians, no matter what their practice situation. New physicians will find it helpful in practice site selection decisions, whether they are investigating specific practice opportunities or comparing several practice sites. Established physicians can use the profiles to make decisions about expanding, relocating, or modifying an existing practice. For example, a physician might wish to use the MAP demographic reports to compare his current patient base with the potential patient population of the community. Another physcian might want to study

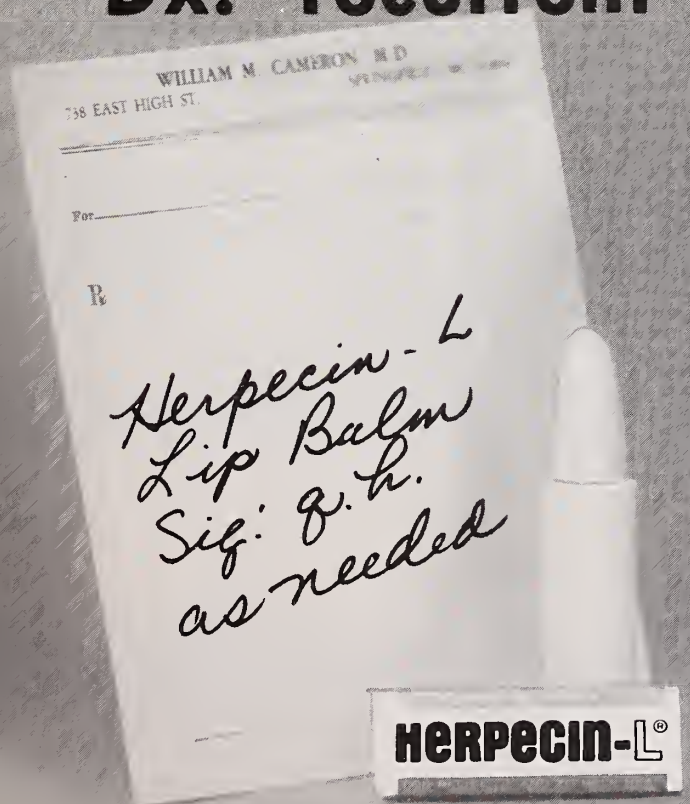
the 5-year projected population figures as part of the development of a long-range practice plan. In any event, the Market Area Profile Service is a valuable planning tool that can help any physician make the right decisions about a medical practice.

A key feature of the MAP Service is the flexibility offered to the physician subscriber in selecting the area to be profiled. There are four choices: (1) County, (2) ZIP Code, (3) City/Town, or (4) Ring Study. The Ring Study option is a unique aspect of the MAP Service that allows the physician to precisely define the area of study in relation to an existing or planned office site. Using a specific street intersection as the center point, the physician can define the area as a ring *of any size* (for example, 5 or 10 miles) around that intersection. This is extremely useful in instances where a standard geographic description does not adequately describe a physician's service area.

The cost of the Market Area Profile Service ranges from $95 to $195, with substantial discounts for AMA members, medical students, and residents. Along with the 6 profile reports, physicians receive a User's Manual that provides data source information and offers useful advice on how to interpret and apply the data to a practice situation.

For further information, and to receive the MAP Registration Package, please contact the AMA Market Area Profile Service, American Medical Association, 535 N. Dearborn, Chicago, IL 60610. PH: (312) 645-4719. ■

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GEORGIA MEDICINE TODAY



Munchausen's with a new twist

How do you simulate "asystolic intervals" during Holter monitoring? All it takes is a twist of the wrist, found Drs. C. Craig Mitchell and Martin J. Frank of the Medical College of Georgia.[1] A 24-year-old woman was referred to the cardiology service with ventricular premature beats, atypical chest pain and recurrent syncope. Medication appeared to control the arrhythmia, but repeated periods of monitoring showed frequent episodes of "asystole" with frequent bizarre "escape" beats.

After insertion of a permanent pacemaker, the "asystolic" episodes initially ceased but later recurred. Erratic patient behavior and close examination of the Holter strips suggested that the bradycardia was probably artifactual. While pseudobradycardia can be caused by component malfunction, the evidence pointed to patient tampering. A quick 20-degree rotation of the recording tape reel was found to produce similar ECG patterns.

This was probably the first reported case of apparent patient-induced pseudobradycardia during Holter monitoring, and it resulted in unnecessary insertion of a permanent pacemaker. Seal the record case, suggest Drs. Mitchell and Frank, if you're trying to prevent "electronic Munchausen's syndrome."

Cervical smoke screen

Cigarette smoking is significantly associated with dysplasia and carcinoma *in situ* of the uterine cervix, according to a case-control study headed by Dr. Edwin Trevathan[2] at Emory University. Among women who smoked, the relative risk of cervical cancer rose to 3.6. Even more alarmingly, the relative risk to women with 12 or more pack-years of exposure rose to 12.7. Further, there was evidence that women who began smoking as early teenagers faced even greater risk. It was hypothesized that the cervical mucosa might be exposed to carcinogens in cigarette smoke that are absorbed into the blood and then secreted by the epithelium.

A *JAMA* editorial comments: "As the Surgeon General's report notes, cigarette smoking is the single largest cause of disease and premature death in this country. We can now add cervical cancer to the list of tobacco-caused diseases."[3]

About "herbal" prednisone and indomethacin

Dr. Gary E. Myerson of Atlanta reports a herbal medication called *chuifong toukuwan,* ordered by mail from Hong Kong, that was used by rheumatoid arthritis patients and caused conditions ranging from acute flares, lesions and Cushingoid appearance to arrhythmias and depression.[4] Three samples analyzed at Georgia Tech were found to contain prednisone and indomethacin, and one included a high concentration of lead. As they say in Georgia, *caveat emptor.*

References: 1. Mitchell CC, Frank MJ: *JAMA 248*:469-470, Jul 23/30, 1982. **2.** Trevathan E, *et al*: *JAMA 250*:499-502, Jul 22/29, 1983. **3.** Austin DF: *JAMA 250*:516-517, Jul 22/29, 1983. **4.** Medical News. *JAMA 248*:623, Aug 13, 1982.

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*Feighner JP, *et al: Psychopharmacology 61*:217-225, Mar 22, 1979.

Please see summary of product information on following page.

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Indications: Relief of moderate to severe depression associated with moderate to severe anxiety.
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Warnings: Use with great care in patients with history of urinary retention or angle-closure glaucoma. Severe constipation may occur in patients taking tricyclic antidepressants and anticholinergic-type drugs. Closely supervise cardiovascular patients. (Arrhythmias, sinus tachycardia and prolongation of conduction time reported with use of tricyclic antidepressants, especially high doses. Myocardial infarction and stroke reported with use of this class of drugs.) Caution patients about possible combined effects with alcohol and other CNS depressants and against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving).
***Usage in Pregnancy:* Use of minor tranquilizers during the first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**
Since physical and psychological dependence to chlordiazepoxide have been reported rarely, use caution in administering Limbitrol to addiction-prone individuals or those who might increase dosage; withdrawal symptoms following discontinuation of either component alone have been reported (nausea, headache and malaise for amitriptyline; symptoms [including convulsions] similar to those of barbiturate withdrawal for chlordiazepoxide).
Precautions: Use with caution in patients with a history of seizures, in hyperthyroid patients or those on thyroid medication, and in patients with impaired renal or hepatic function. Because of the possibility of suicide in depressed patients, do not permit easy access to large quantities in these patients. Periodic liver function tests and blood counts are recommended during prolonged treatment. Amitriptyline component may block action of guanethidine or similar antihypertensives. Concomitant use with other psychotropic drugs has not been evaluated; sedative effects may be additive. Discontinue several days before surgery. Limit concomitant administration of ECT to essential treatment. See Warnings for precautions about pregnancy. Limbitrol should not be taken during the nursing period. Not recommended in children under 12. In the elderly and debilitated, limit to smallest effective dosage to preclude ataxia, oversedation, confusion or anticholinergic effects.
Adverse Reactions: Most frequently reported are those associated with either component alone: drowsiness, dry mouth, constipation, blurred vision, dizziness and bloating. Less frequently occurring reactions include vivid dreams, impotence, tremor, confusion and nasal congestion. Many depressive symptoms including anorexia, fatigue, weakness, restlessness and lethargy have been reported as side effects of both Limbitrol and amitriptyline. Granulocytopenia, jaundice and hepatic dysfunction have been observed rarely.
The following list includes adverse reactions not reported with Limbitrol but requiring consideration because they have been reported with one or both components or closely related drugs:
Cardiovascular: Hypotension, hypertension, tachycardia, palpitations, myocardial infarction, arrhythmias, heart block, stroke.
Psychiatric: Euphoria, apprehension, poor concentration, delusions, hallucinations, hypomania and increased or decreased libido.
Neurologic: Incoordination, ataxia, numbness, tingling and paresthesias of the extremities, extrapyramidal symptoms, syncope, changes in EEG patterns.
Anticholinergic: Disturbance of accommodation, paralytic ileus, urinary retention, dilatation of urinary tract.
Allergic: Skin rash, urticaria, photosensitization, edema of face and tongue, pruritus.
Hematologic: Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia.
Gastrointestinal: Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, black tongue.
Endocrine: Testicular swelling and gynecomastia in the male, breast enlargement, galactorrhea and minor menstrual irregularities in the female, elevation and lowering of blood sugar levels, and syndrome of inappropriate ADH (antidiuretic hormone) secretion.
Other: Headache, weight gain or loss, increased perspiration, urinary frequency, mydriasis, jaundice, alopecia, parotid swelling.
Overdosage: Immediately hospitalize patient suspected of having taken an overdose. Treatment is symptomatic and supportive. I.V. administration of 1 to 3 mg physostigmine salicylate has been reported to reverse the symptoms of amitriptyline poisoning. See complete product information for monitestation and treatment.
Dosage: Individualize according to symptom severity and patient response. Reduce to smallest effective dosage when satisfactory response is obtained. Larger portion of daily dose may be taken at bedtime. Single *h.s.* dose may suffice for some patients. Lower dosages are recommended for the elderly.
Limbitrol DS (double strength) Tablets, initial dosage of three or four tablets daily in divided doses, increased up to six tablets or decreased to two tablets daily as required. Limbitrol Tablets, initial dosage of three or four tablets daily in divided doses, for patients who do not tolerate higher doses.
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*Cardizem is indicated in the treatment of angina pectoris due to coronary artery spasm and in the management of chronic stable angina (classic effort-associated angina) in patients who cannot tolerate therapy with beta-blockers and/or nitrates or who remain symptomatic despite adequate doses of these agents.

References:
1. Strauss WE, McIntyre KM, Parisi AF, et al: Safety and efficacy of diltiazem hydrochloride for the treatment of stable angina pectoris: Report of a cooperative clinical trial. Am J Cardiol 49:560-566, 1982.
2. Pool PE, Seagren SC, Bonanno JA, et al: The treatment of exercise-inducible chronic stable angina with diltiazem: Effect on treadmill exercise. Chest 78 (July suppl):234-238, 1980.

Reduces angina attack frequency*
42% to 46% decrease reported in multicenter study.[1]

Increases exercise tolerance*
In Bruce exercise test,[2] control patients averaged 8.0 minutes to onset of pain; Cardizem patients averaged 9.8 minutes ($P<.005$).

CARDIZEM®
(diltiazem HCl)

THE BALANCED CALCIUM CHANNEL BLOCKER

Please see full prescribing information on following page.

MEDICAL MEETING CALENDAR

OCTOBER

16-19—*Hilton Head Island, SC:* **Recent Developments in the Clinical Management of Diabetes and Endocrine Disorders.** AMA Category 1 and AAFP prescribed credit. Contact Edwin Bransome, Jr., MD, Dept. of Medicine, MCG, Augusta 30912. PH:404/828-3445.

17-18—*Atlanta:* **Current Issues in Reproductive Health.** Category 1 credit. Contact Office of CME, Emory Univ. Sch. of Med., 1440 Clifton Rd., NE, Ste. 110, Atlanta 30322. PH:404/727-0468.

17-20—*Sea Island:* **Georgia Orthopaedic Society.** Contact William Collins, MD, Secy-Treas., Ga. Orthopaedic Society, 993-C Johnson Ferry Rd., NE, Atlanta 30342. PH: 404/255-4582.

17-20—*Pine Mountain:* **Rehabilitation of the Coronary Patient.** Category 1 credit. Contact Extramural Programs Department, American Coll. of Cardiology, 9111 Old Georgetown Rd., Bethesda, MD 20814. PH:301/897-5400.

18-19—*Augusta:* **Medical Fair and Pre-Practice Seminar.** Contact Lamont Nottingham, Proj. Dir., Phy. Recruitment Prog., MAG, 938 Peachtree St., Atlanta 30309. PH:404/876-7535 or 1-800-282-0224 (toll free in Ga.).

19-20—*Atlanta:* **American Acad. of Facial Plastic & Reconstructive Surgery.** Contact AAFPRS, 1101 Vermont Ave., NW, Ste. 304, Washington, DC 20005. PH:202/842-4500.

19-20—*Callaway Gardens:* **Georgia Gastroenterologic Society.** Category 1 credit. Contact Joe Griffin, Jr., MD, Vice Pres., GGS, G.I. Med., BIW 558, MCG, Augusta 30912. PH:404/828-2238.

20-24—*Atlanta:* **Amer. Acad. of Otolaryngology — Head and Neck Surgery.** Contact AAOHNS, 1101 Vermont Ave., NW, Ste. 302, Washington, DC 20005. PH:202/289-4607.

23-25—*Atlanta:* **Neuroradiology Update—1985.** Category 1 credit. Contact Office of CME, Emory Univ. Sch. of Med., 1440 Clifton Rd., Ste. 110, Atlanta 30322. PH:404/727-0468.

25-26—*Savannah:* **Georgia Society of Internal Medicine Annual Meeting.** Contact Albert Carr, M.D., MCG, Augusta 30912. PH:404/828-2736.

27-30—*Unicoi State Park:* **Institute on Group Behavior and Group Leadership.** Category 1 credit. Contact Office of CME, Emory Univ. Sch. of Med., 1440 Clifton Rd., NE, Ste. 110, Atlanta 30322. PH:404/727-0468.

30—*Atlanta:* **Seventh Annual Joseph S. Skobba Symposium.** Category 1 credit. Contact Office of CME, Emory Univ. Sch. of Med., 1440 Clifton Rd., NE, Ste. 110, Atlanta 30322. PH:404/727-0468.

NOVEMBER

1—*Atlanta:* **Endometriosis Update.** AMA Category 1 and AAFP prescribed credit. Contact Amir Ansari, MD, Dir., Dept. OB/GYN, Ga. Baptist Med. Ctr., 340 Blvd. NE, Ste. 641, Atlanta 30312. PH:404/653-4767.

4-8—*Atlanta:* **Magnetic Resonance Imaging.** Category 1 credit. Contact Office of CME, Emory Univ. Sch. of Med., 1440 Clifton Rd., NE, Atlanta 30322. PH:404/727-0468.

11-15—*Augusta:* **Obstetrics and Gynecology.** Category 1 credit. Contact Div. of Cont. Ed., MCG, Augusta 30912. PH:404/828-3967.

14-16—*Atlanta:* **Georgia Acad. of Family Physicians Annual Meeting.** Contact Camille Day, GAFP, 11 Corporate Square, Ste. 205, Atlanta 30329. PH:404/321-7445.

19-20—*Atlanta:* **Seizure Disorders Update 1985.** Category 1 credit. Contact Office of CME, Morehouse Sch. of Med., 720 Westview Dr., SW, Atlanta 30310. PH:404/752-1631.

21-24—*Atlanta:* **From Head to Toes: A Practical Approach to Orthopaedics for the Primary Care Physician.** Category 1 credit. Contact Office of CME, Emory Univ. Sch. of Med., 1440 Clifton Rd., NE, Atlanta 30322. PH:404/727-0468.

22-24—*Atlanta:* **MAG Scientific Assembly.** Category 1 credit. Contact Stephen Davis, MAG, 938 Peachtree St., NE, Atlanta 30309. PH:404/876-7535 or 1-800-282-0224 (toll free in Ga.).

DECEMBER

2-6—*Atlanta:* **Magnetic Resonance Imaging.** Category 1 credit. Contact Office of CME, Emory Univ. Sch. of Med., 1440 Clifton Rd., NE, Atlanta 30322. PH: 404/727-0468.

4-6—*Atlanta:* **Techniques in Orthopaedic Surgery: Total Knee Replacement.** Category 1 credit. Contact Office of CME, Emory Univ. Sch. of Med., 1440 Clifton Rd., NE, Atlanta 30322. PH:404/727-0468.

4-8—*Atlanta:* **10th Annual Southeastern Conference on Alcohol and Drug Abuse.** Contact Charter Med. Corp., Addictive Disease Div., 5780 Peachtree-Dunwoody Rd., Ste. 170, Atlanta 30342. PH:404/257-9333.

6-7—*Atlanta:* **A Basic Course in Phacoemulsification and Extracapsular Cataract Extraction with Posterior Chamber Lens Implantation.** Category 1 credit. Contact Ginger Lineberger, Found. Coord., The Hallum-Arnold Eye Found., Inc., 3280 Howell Mill Rd., Ste. 104, Atlanta 30327. PH:404/351-2713.

7—*Atlanta:* **MRI: Current Indications and Limitations.** Category 1 credit. Contact Office of CME, Emory Univ. Sch. of Med., 1440 Clifton Rd., NE, Ste. 110, Atlanta 30322. PH:404/727-0468.

7-8—*Atlanta:* **Regional Anesthesia: Surgery, Obstetrics and Pain.** Category 1 credit. Contact Office of CME, Emory Univ. Sch. of Med., 1440 Clifton Rd., NE, Ste. 110, Atlata 30322. PH:404/727-0468.

JANUARY

24-25—*Atlanta:* **An Introduction to Radial Keratotomy.** Category 1 credit. Contact Office of CME, Emory Univ. Sch. of Med., 1440 Clifton Rd., Ste. 110, Atlanta 30322. PH:404/727-0468.

FEBRUARY

22-23—*Augusta:* **Georgia Society of Anesthesiologists.** Category 1 credit. Contact William Hammonds, MD, Secy-Treas., GSA, Emory Univ. Hosp., Dept. of Anesth., 1365 Clifton Rd., NE, Atlanta 30322. PH:404/321-0111.

26-March 2—*San Juan, PR:* **The Eighth Annual Pediatric Postgraduate Course.** Category 1 and AAFP prescribed credits. Contact Judson Hawk, Jr., MD, Scottish Rite Children's Hosp., 1001 Johnson Ferry Rd., Atlanta 30363. PH:404/257-2040.

This Is Family Health Month

The family physician: patient's advocate in the complex health care system.

OCTOBER HAS BEEN designated as Family Health Month by the 57,000-member American Academy of Family Physicians and the Georgia Academy of Family Physicians. In the interest of broadening awareness and raising the consciousness of the public toward better health, the Georgia Academy is sponsoring Family Health Month in Georgia.

The Governor signed a proclamation on September 16th designating October as Family Health Month in Georgia.

All across this country and especially in Georgia, family physicians are encouraging families to take a close look at their eating habits, physical fitness, mental health, and possible hazards in the home. The Georgia Academy is committed to making sure that every citizen has the opportunity to achieve the best health possible.

Governor Joe Frank Harris signed a proclamation on September 16 designating October as Family Health Month in Georgia. The Georgia Academy will be providing appropriate news releases to 250 Georgia newspapers. A Family Health Month Supplement will be distributed by the *Augusta Chronicle* (circulation 91,000) on Sunday, October 6. Public Service Announcements are being provided to 140 radio stations through the Georgia Radio News Service and to television stations across the state. Twenty-thousand flyers are being inserted in bank statements in Georgia communities to encourage families to "Make a partnership for health with your Family Physician."

The Georgia Academy of Family Physicians is dedicated to the concept that the family physician is the personal health care consultant to all members of the family.

The Georgia Academy of Family Physicians is an organization representing over 1000 men and women dedicated to the concept that the family physician is the personal health care consultant to all members of the family. The family practice specialist serves as the patient's advocate in the complex health care system we live in, and is committed to providing the entire family with quality, comprehensive, and cost effective health care.

Andrew P. Morley, Jr., M.D.
President
Georgia Academy of Family Physicians

H. Hilt Hammett, Jr.: Inveterate Spokesman for Medicine

A look at the life and career of a man dedicated to medicine.

Dr. H. Hilt Hammett, Jr., of LaGrange, Georgia, a former President of the Medical Association of Georgia, a delegate to the American Medical Association and a nationally recognized leader and spokesman for the medical community, died in Birmingham, Alabama, at University Hospital from complications of coronary by-pass surgery on August 18, 1985, at the age of 67.

Dr. Hammett was a graduate of Emory University School of Medicine and had practiced Ophthalmology and Otolaryngology in LaGrange since 1949. He was a former President of the Troup County Medical Society and former Chief of Staff of West Georgia Medical Center. He was also a former treasurer and member of the Board of Trustees.

Dr. Hammett was a former Chairman of the Board of Blue Cross, Blue Shield of Columbus for more than 20 years. He was both second and first Vice-President of the Medical Association of Georgia, before assuming the Presidency in 1980.

During his terms in office, he said, "I do not accept the condemnation of our profession by politicians and government bureaucrats. American medicine accepted the challenge many years ago to provide the finest medical care available anywhere. I believe our profession continues to meet the challenge." Dr. Hammett stated that, "we must never forget that government, however necessary, has nothing to give but that which it first takes away."

"Government is a consumer and not a producer. But, this applies equally to our profession as well as to our government — that there are no rights without duties and no privileges without responsibilities. The dangers of all times are the dangers of apathy and complacency."

He was irrevocably committed to continue to demand the individual's right to privacy and to the preservation of the private patient-physician relationship.

He believed that medicine must continue to vigorously oppose any regulatory action that would restrict or restrain the operation of the free enterprise principle in the delivery of quality health care.

Dr. Hammett was an *excellent* physician and surgeon, totally committed to the Medical Association of Georgia, the American Medical Association, Blue Cross, Blue Shield, and activities dealing with medicine in the private sector.

Dr. Hammett was a dear friend and articulate spokesman for organized medicine and will be sorely missed.

The following excerpt form his Presidential address, sums up the man:

"Americans must heed the opportunity to believe that freedom and justice are inseparable, that responsibility accompanies privilege, that the individual is the most important element in a free society, that liberty is man's most valuable possession, and that character is the measure of his worth."

Thus speaks H. Hilt Hammett, Jr., M.D. a truly remarkable man who gave selflessly of his time and energy, was concerned about the future of medicine, and constantly encouraged young physicians to get involved.

Dr. Hammett is survived by his wife, Mrs. Katherine Hammett; one son, H. Hilt Hammett; two daughters, Mrs. Susan Freeman of LaGrange, and Mrs. Wayne Phillips of Vidalia, Georgia; one sister, Bernice Hammett, of LaGrange; and four grandchildren.

Respectfully submitted,
Carson B. Burgstiner, M.D.
OB/GYN, Savannah
Past President, MAG

Ode To A Man

A tribute to one of Georgia's medical leaders.

I FIRST MET H. Hilt Hammett, Jr., in 1942. As a rising sophomore medical student at Emory, I had been fortunate enough to get a job at Grady Hospital as a night-time x-ray technician. The job paid room and board and laundry, but the real "perk" was that you were *given* and allowed to wear the sacred white ducks. I had just picked up a set of six pants and shirts and thought I'd died and gone straight to heaven. I was assigned a room atop the intern's quarters in the J. J. Gray Building, over the Emergency Room and adjacent to the Delivery Room. As I got off the creaking, crawling elevator and turned back into the hallowed ground, I was met with ear splitting screams of a young teenager about to become a mother — relentless, repetitive, and attention getting. As I entered the "Quarters," there coming toward me, naked save for a towel girded and held with one big hand was a real bear of a man, hunched forward, jaw jutting, coming from the bath to his room — the second from the entry and privy to all that occurred on the O.B. service. "Gawd damn" he said — "Someone ought to give that poor soul an aspirin!"

The scene was etched in my mind and vividly recalled a short time ago when I saw that same bullish bear of a man lying peacefully but looking no less intense and caring as he had 43 years ago. This time he was quiet as only Pavulon and a respirator can quiet you, but the intensity of expression and the man's integrity were strikingly visible.

He died a few days later, although there were many of us, family and friends and more recent acquaintances, who thought it just couldn't happen.

He had given serious consideration to retirement and to the travel both he and Katherine so fully and wonderfully enjoyed. But he had persisted — recently accepting the awesome responsibility of the Chairmanship of the Composite State Board of Medical Examiners, attesting to the qualities recognized by his fellow members during his tenure as a member of the Board.

As I entered the "Quarters," there coming toward me, naked save for a towel girded and held with one big hand was a real bear of a man, hunched forward, jaw jutting, coming from the bath to his room. . . .

The man has functioned with the same intensity and integrity throughout his life — at his hospital, in his community, his church, and with the local, state and national medical societies he served so well. He *cared!*

"Someone ought to give that poor soul an aspirin!"

H. Hilt Hammett, Jr. — Pax requiem!

William W. Moore, Jr., M.D.
Neurosurgeon, Atlanta
Past President, MAG

THE FAMILY PHYSICIAN: BOTH GIVER AND RECEIVER

GEORGE W. SHANNON, M.D., AND HELEN S. PETERSON, ED.D

Family practice continues to adapt to society's changes.

It is almost unnecessary to remark that the public, in which we live and move, has not been slow to recognize the advantage of a division of labour in the field of medicine. The desire for expert knowledge is, however, now so general that there is grave danger lest the family doctor should become, in some places, a relic of the past.

— Sir William Osler, Remarks on Specialism, *Boston Medical and Surgical Journal, 1892.*

THE DELIVERY of health care to the American public has become continually more complex. The population size has increased, life expectancy has lengthened, and family structure has changed. Economic stringencies have caused us to be more aware of health care expenditures. Over the last quarter century, family physicians, working within the specialty of family practice, have responded to these and other changes. Consequently, they have once again become a significant and integral provider of quality health care to families.

Such involvement has required of the family physician a continually updated fund of clinical knowledge and skills as well as the development of other less physiologic abilities. The family physician has demonstrated an ability to recognize and appreciate the new roles of women outside the home which also have an effect upon the health of the entire family. The family physician has learned to relate to the particular needs of single parent families. The family physician has developed an understanding of geriatric needs and the abilities to meet these. And, the family physician has made concerted efforts to remain aware of economic stresses created by a changing society.

Family physicians find their practice of medicine richly rewarding but tenaciously demanding of all their talents and resources.

In this regard, family doctors find their practice of medicine richly rewarding but tenaciously demanding of all their talents and resources. Typically, a day for a family physician involves rounding on a hospitalized youngster, checking in on an obstetrical patient and her newborn infant, writing orders on an elderly patient in the CCU, seeing 40 or more ambulatory patients with a myriad of diagnoses in the office practice, and then often attending a staff meeting, medical society meeting, or community meeting in the evening hours before retiring to his or her own home and family.

As with other specialists, family doctors see many disease processes common to their specialty. The role could become mundane if it were not for the fact that intermingled with the common disorders are those more complex diagnoses which pose both intellectual and financial challenges. Because family doctors are acutely aware of how medical costs affect the financial status of their families, there is always the added concern of providing the highest quality care most cost effectively without compromising the health and well being of their patients. The consideration which

Dr. Shannon is Director of Medical Education and Dr. Peterson is Educational Psychologist for the Medical Education program at the Medical Center in Columbus.

family doctors display in this regard does not go unappreciated by their patients who have come to trust in them.

Two additional aspects of a family physician's role add a certain richness to the specialty. Concomitant with providing care for the ill is the often more pleasant task of teaching patients how to stay well. While this may seem to be a contradiction of roles, the reward comes when his or her patients begin taking the initiative to promote their own wellbeing by developing more healthy lifestyles. In essence, every physician feels personally more gratified when patients continue to live long and healthy lives. Family physicians are able to delight even more when they find themselves treating three and four generations of a sound and healthy family.

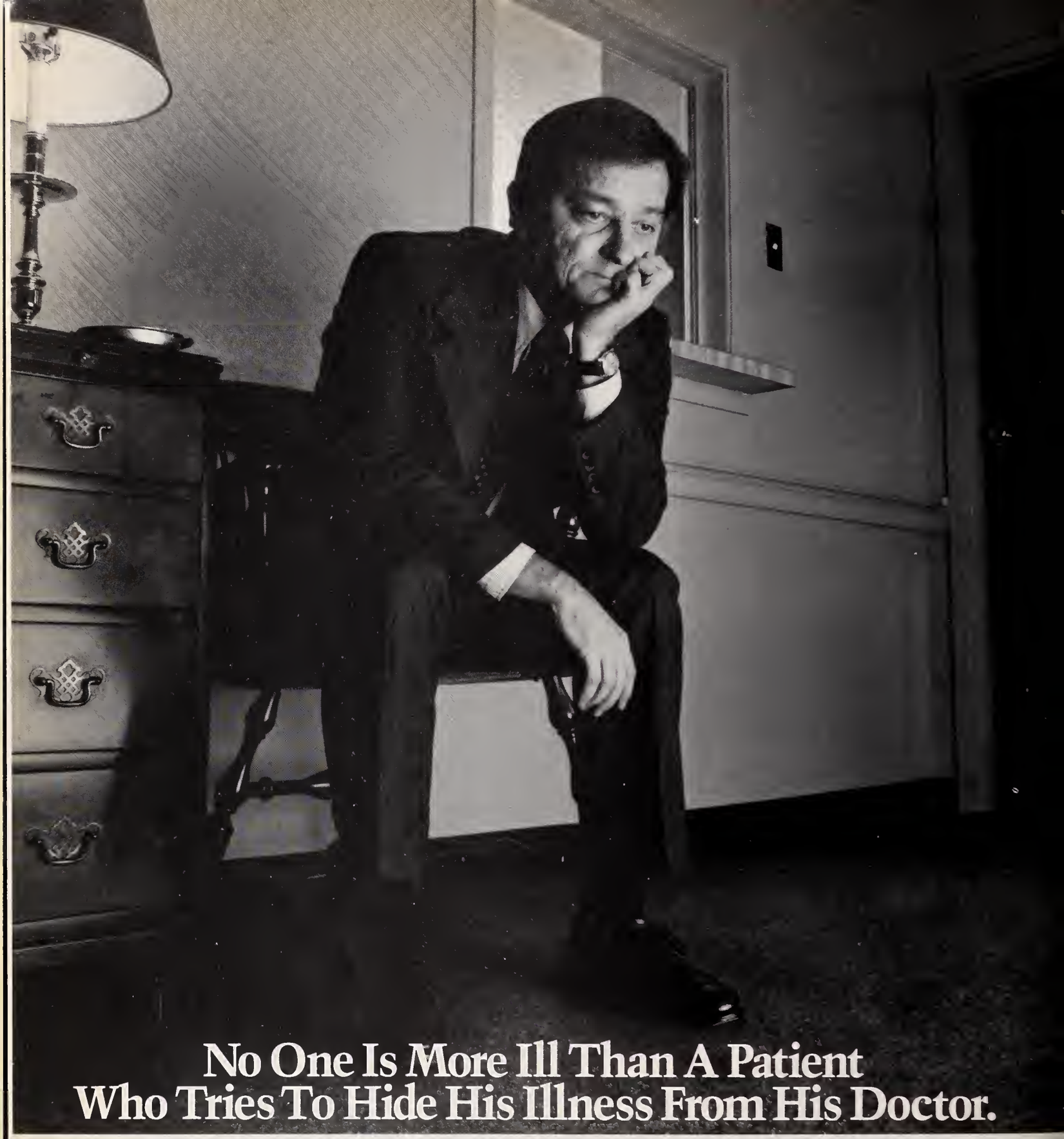
Concomitant with providing care for the ill is the often more pleasant task of teaching patients how to stay well.

A second aspect of their role which adds depth to their practice as Family Physicians is that of being a counselor, confidante, and friend to each of their many patients. Being in the unique position of knowing the family members individually, a family doctor is able to use wisdom in helping to establish and/or maintain healthy family functioning. He or she understands the value of positive family relationships to the quality of life of each of the individuals concerned and therefore is able, over the course of time, to provide guidance to his or her patients in this regard. The added benefit, of course, is to the physician, who through these rich and caring relationships, is also able to grow!

While health care delivery indeed has become an exceedingly complex matter, family physicians have been both givers and recipients of the benefits of being members of this particular specialty. As they remain open to the many needs of their patients, they will continue to succeed in their position as a valuable health care provider in an ever-changing society.

Like the ideal wife of whom Plutarch speaks, the best doctor is often the one of whom the public hears the least. . . . To you the silent workers of the ranks, in villages and country districts, in the slums of our large cities, in the mining camps and factory towns, in the homes of the rich, and in the hovels of the poor, to you is given the harder task of illustrating with your lives the Hippocratic standards of learning, of sagacity, of humanity, and of probity. Of learning, that you may apply in your practice the best that is known in our art, and that with the increase in your knowledge there may be an increase in that priceless endowment of sagacity, so that to all, everywhere, skilled succour may come in the hour of need. Of a humanity, that will show, in your daily life, tenderness and consideration to the weak, infinite pity to the suffering, and broad charity to all. Of a probity, that will make you under all circumstances true to yourselves, true to your high calling, and true to your fellow man.''

— *Osler, ''The Master Word in Medicine,''* Montreal Medical Journal, *1902.* ■



No One Is More Ill Than A Patient Who Tries To Hide His Illness From His Doctor.

You know it's not your everyday patient problem. Alcoholism is far different from most other diseases. Patients try to hide it from you. They resist treatment. They deny they have the disease at all.

Such a complex physical and emotional problem usually requires extensive evaluation. And intervention counseling is frequently needed.

If you are a specialist in addiction treatment, you're equipped to deal with these problems. If not, consider Brookwood Recovery Center as your specialist and partner in the treatment of alcoholism and drug abuse. We're a specialized facility staffed to serve both your patient and patient's family. Our nationally recognized treatment programs have given us one of the best recovery rates in the country. And once recovered, your patients and their families return to being the kind of patients that let you help them once again.

For further information on how a Brookwood Recovery Center can help you effectively treat this problem, call our treatment center in Dublin at 912/275-0183, or 1-800-241-5216 in the State of Georgia, anytime, day or night.

BROOKWOOD
RECOVERY CENTERS
A health care service of
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Among so many once-daily antihypertensives, only one can offer so much...



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Once-daily INDERIDE® LA

The world's leading beta blocker and diuretic—for once-daily convenience without compromise

When selecting other once-daily agents, physicians may have to compromise either their choice of beta blocker or diuretic. With INDERIDE® LA, physicians have the agents most widely prescribed worldwide—INDERAL® and hydrochlorothiazide—with the convenience of once-daily dosage.

24-hour blood pressure control with the broad benefits of INDERAL (propranolol HCl)

The controlled-release delivery system of INDERIDE LA provides 24-hour beta blockade and the broad cardiovascular benefits of INDERAL with a single daily dose. Compliance is enhanced because once-daily administration fits easily into patients' daily routines.

Plus standard-release hydrochlorothiazide, the thiazide of choice for comfortable morning diuresis

Hydrochlorothiazide is the world's most widely prescribed antihypertensive diuretic. When taken in the morning, INDERIDE LA provides comfortable morning diuresis. Each dosage strength of INDERIDE LA contains:

—one of the three most widely prescribed dosage strengths of INDERAL® LA—80 mg, 120 mg, or 160 mg and

—an established, effective daily dose of standard-release hydrochlorothiazide—50 mg

New once-daily INDERIDE® LA

Each capsule contains propranolol HCl (INDERAL® LA), 80 mg, 120 mg, or 160 mg, and hydrochlorothiazide, 50 mg

Convenience without compromise

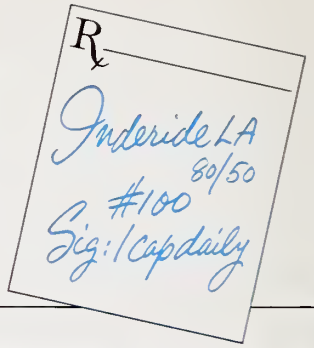


*The appearance of INDERIDE® LA Capsules is a registered trademark of Ayerst Laboratories.

Please see following page for brief summary of prescribing information.

Once-daily
INDERIDE® LA
Convenience without compromise
One capsule—Once daily





* The appearance of these capsules is a registered trademark of Ayerst Laboratories.

BRIEF SUMMARY *(FOR FULL PRESCRIBING INFORMATION, SEE PACKAGE CIRCULAR.)*

INDERIDE® LA Brand of **PROPRANOLOL HYDROCHLORIDE (INDERAL® LA) and HYDROCHLOROTHIAZIDE (Long Acting Capsules)**

No. 455—Each INDERIDE® LA 80/50 Capsule contains:
Propranolol hydrochloride (INDERAL® LA) . . . . . 80 mg
Hydrochlorothiazide . . . . . 50 mg

No. 457—Each INDERIDE® LA 120/50 Capsule contains:
Propranolol hydrochloride (INDERAL® LA) . . . . . 120 mg
Hydrochlorothiazide . . . . . 50 mg

No. 459—Each INDERIDE® LA 160/50 Capsule contains
Propranolol hydrochloride (INDERAL® LA) . . . . . 160 mg
Hydrochlorothiazide . . . . . 50 mg

INDERIDE LA is indicated in the management of hypertension.

This fixed-combination drug is not indicated for initial therapy of hypertension. If the fixed combination represents the dose titrated to the individual patient's needs, therapy with the fixed combination may be more convenient than with the separate components.

CONTRAINDICATIONS

Propranolol hydrochloride (INDERAL®):
Propranolol is contraindicated in: 1) cardiogenic shock; 2) sinus bradycardia and greater than first degree block, 3) bronchial asthma, 4) congestive heart failure (see WARNINGS) unless the failure is secondary to a tachyarrhythmia treatable with propranolol.

Hydrochlorothiazide:
Hydrochlorothiazide is contraindicated in patients with anuria or hypersensitivity to this or other sulfonamide-derived drugs.

WARNINGS

Propranolol hydrochloride (INDERAL®):
CARDIAC FAILURE: Sympathetic stimulation may be a vital component supporting circulatory function in patients with congestive heart failure, and its inhibition by beta blockade may precipitate more severe failure. Although beta blockers should be avoided in overt congestive heart failure, if necessary, they can be used with close follow-up in patients with a history of failure who are well compensated, and are receiving digitalis and diuretics. Beta-adrenergic blocking agents do not abolish the inotropic action of digitalis on heart muscle.

IN PATIENTS WITHOUT A HISTORY OF HEART FAILURE, continued use of beta blockers can, in some cases, lead to cardiac failure. Therefore, at the first sign or symptom of heart failure, the patient should be digitalized and/or treated with diuretics, and the response observed closely, or propranolol should be discontinued (gradually, if possible).

IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following abrupt discontinuance of propranolol therapy. Therefore, when discontinuance of propranolol is planned, the dosage should be gradually reduced and the patient carefully monitored. In addition, when propranolol is prescribed for angina pectoris, the patients should be cautioned against interruption or cessation of therapy without the physician's advice. If propranolol therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute propranolol therapy and take other measures appropriate for the management of unstable angina pectoris. Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease who are given propranolol for other indications.

THYROTOXICOSIS: Beta blockade may mask certain clinical signs of hyperthyroidism. Therefore, abrupt withdrawal of propranolol may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm. Propranolol does not distort thyroid function tests.

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker. In one case this resulted after an initial dose of 5 mg propranolol.

MAJOR SURGERY: The necessity or desirability of withdrawal of beta-blocking therapy prior to major surgery is controversial. It should be noted, however, that the impaired ability of the heart to respond to reflex adrenergic stimuli may augment the risks of general anesthesia and surgical procedures.

Nonallergic Bronchospasm (eg, chronic bronchitis, emphysema)—PATIENTS WITH BRONCHOSPASTIC DISEASES SHOULD, IN GENERAL, NOT RECEIVE BETA BLOCKERS. INDERAL should be administered with caution since it may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta receptors.

DIABETES AND HYPOGLYCEMIA: Beta-adrenergic blockade may prevent the appearance of certain premonitory signs and symptoms (pulse rate and pressure changes) of acute hypoglycemia in labile insulin-dependent diabetes. In these patients, it may be more difficult to adjust the dosage of insulin. Hypoglycemic attacks may be accompanied by a precipitous elevation of blood pressure.

Hydrochlorothiazide:
Thiazides should be used with caution in severe renal disease. In patients with renal disease, thiazides may precipitate azotemia. In patients with impaired renal function, cumulative effects of the drug may develop.

Thiazides should also be used with caution in patients with impaired hepatic function or progressive liver disease, since minor alterations of fluid and electrolyte balance may precipitate hepatic coma.

Thiazides may add to or potentiate the action of other antihypertensive drugs. Potentiation occurs with ganglionic or peripheral adrenergic-blocking drugs.

Sensitivity reactions may occur in patients with a history of allergy or bronchial asthma.

The possibility of exacerbation or activation of systemic lupus erythematosus has been reported.

PRECAUTIONS

Propranolol hydrochloride (INDERAL®):
GENERAL: Propranolol should be used with caution in patients with impaired hepatic or renal function. Propranolol is not indicated for the treatment of hypertensive emergencies.

Beta-adrenoreceptor blockade can cause reduction of intraocular pressure. Patients should be told that propranolol may interfere with the glaucoma screening test. Withdrawal may lead to a return of increased intraocular pressure.

CLINICAL LABORATORY TESTS: Elevated blood urea levels in patients with severe heart disease, elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase.

DRUG INTERACTIONS: Patients receiving catecholamine-depleting drugs, such as reserpine, should be closely observed if propranolol is administered. The added catecholamine-blocking action may produce an excessive reduction of resting sympathetic nervous activity, which may result in hypotension, marked bradycardia, vertigo, syncopal attacks, or orthostatic hypotension.

CARCINOGENESIS, MUTAGENESIS, IMPAIRMENT OF FERTILITY: Long-term studies in animals have been conducted to evaluate toxic effects and carcinogenic potential. In 18-month studies, in both rats and mice, employing doses up to 150 mg/kg/day, there was no evidence of significant drug-induced toxicity. There were no drug-related tumorigenic effects at any of the dosage levels. Reproductive studies in animals did not show any impairment of fertility that was attributable to the drug.

PREGNANCY: Pregnancy Category C. Propranolol has been shown to be embryotoxic in animal studies at doses about 10 times greater than the maximal recommended human dose. There are no adequate and well-controlled studies in pregnant women. Propranolol should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

NURSING MOTHERS: Propranolol is excreted in human milk. Caution should be exercised when propranolol is administered to a nursing mother.

PEDIATRIC USE: Safety and effectiveness in children have not been established.

Hydrochlorothiazide:
GENERAL: Periodic determination of serum electrolytes to detect possible electrolyte imbalance should be performed at appropriate intervals.

All patients receiving thiazide therapy should be observed for clinical signs of fluid or electrolyte imbalance, namely: Hyponatremia, hypochloremic alkalosis, and hypokalemia. Serum and urine electrolyte determinations are particularly important when the patient is vomiting excessively or receiving parenteral fluids. Medication such as digitalis may also influence serum electrolytes. Warning signs irrespective of cause are: Dryness of mouth, thirst, weakness, lethargy, drowsiness, restlessness, muscle pains or cramps, muscular fatigue, hypotension, oliguria, tachycardia, and gastrointestinal disturbances such as nausea and vomiting.

Hypokalemia may develop, especially with brisk diuresis, when severe cirrhosis is present, or during concomitant use of corticosteroids or ACTH.

Interference with adequate oral electrolyte intake will also contribute to hypokalemia. Hypokalemia can sensitize or exaggerate the response of the heart to the toxic effect of digitalis (eg, increased ventricular irritability). Hypokalemia may be avoided or treated by use of potassium supplements, such as foods with a high potassium content.

Any chloride deficit is generally mild and usually does not require specific treatment, except under extraordinary circumstances (as in liver or renal disease). Dilutional hyponatremia may occur in edematous patients in hot weather; appropriate therapy is water restriction, rather than administration of salt, except in rare instances when the hyponatremia is life-threatening. In actual salt depletion, appropriate replacement is the therapy of choice.

Hyperuricemia may occur or frank gout may be precipitated in certain patients receiving thiazide therapy.

Insulin requirements in diabetic patients may be increased, decreased, or unchanged. Diabetes mellitus which has been latent may become manifest during thiazide administration.

If progressive renal impairment becomes evident, consider withholding or discontinuing diuretic therapy.

Thiazides may decrease serum PBI levels without signs of thyroid disturbance.

Calcium excretion is decreased by thiazides. Pathologic changes in the parathyroid gland with hypercalcemia and hypophosphatemia have been observed in a few patients on prolonged thiazide therapy. The common complications of hyperparathyroidism, such as renal lithiasis, bone resorption, and peptic ulceration have not been seen. Thiazides should be discontinued before carrying out tests for parathyroid function.

DRUG INTERACTIONS: Thiazide drugs may increase the responsiveness to tubocurarine.

The antihypertensive effects of thiazides may be enhanced in the postsympathectomy patient. Thiazides may decrease arterial responsiveness to norepinephrine. This diminution is not sufficient to preclude effectiveness of the pressor agent for therapeutic use.

PREGNANCY: Pregnancy Category C. Thiazides cross the placental barrier and appear in cord blood. The use of thiazides in pregnancy requires that the anticipated benefit be weighed against possible hazards to the fetus. These hazards include fetal or neonatal jaundice, thrombocytopenia, and possibly other adverse reactions which have occurred in the adult.

NURSING MOTHERS: Thiazides appear in human milk. If use of the drug is deemed essential, the patient should stop nursing.

PEDIATRIC USE: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS

Propranolol hydrochloride (INDERAL®):
Most adverse effects have been mild and transient and have rarely required the withdrawal of therapy.

Cardiovascular: Bradycardia, congestive heart failure; intensification of AV block, hypotension; paresthesia of hands; thrombocytopenic purpura; arterial insufficiency, usually of the Raynaud type.

Central Nervous System: Lightheadedness; mental depression manifested by insomnia, lassitude, weakness, fatigue; reversible mental depression progressing to catatonia; visual disturbances, hallucinations; an acute reversible syndrome characterized by disorientation for time and place, short-term memory loss, emotional lability, slightly clouded sensorium, and decreased performance on neuropsychometrics.

Gastrointestinal: Nausea, vomiting, epigastric distress, abdominal cramping, diarrhea, constipation, mesenteric arterial thrombosis, ischemic colitis.

Allergic: Pharyngitis and agranulocytosis; erythematous rash; fever combined with aching and sore throat, laryngospasm and respiratory distress.

Respiratory: Bronchospasm.

Hematologic: Agranulocytosis; nonthrombocytopenic purpura, thrombocytopenic purpura.

Auto-Immune: In extremely rare instances, systemic lupus erythematosus has been reported.

Miscellaneous: Alopecia, LE-like reactions, psoriasiform rashes; dry eyes; male impotence, and Peyronie's disease have been reported rarely. Oculomucocutaneous reactions involving the skin, serous membranes, and conjunctivae reported for a beta blocker (practolol) have not been associated with propranolol.

Hydrochlorothiazide:
Gastrointestinal: Anorexia; gastric irritation, nausea, vomiting, cramping; diarrhea; constipation; jaundice (intrahepatic cholestatic jaundice); pancreatitis; sialadenitis.

Central Nervous System: Dizziness, vertigo; paresthesias; headache, xanthopsia.

Hematologic: Leukopenia, agranulocytosis; thrombocytopenia, aplastic anemia.

Cardiovascular: Orthostatic hypotension (may be aggravated by alcohol, barbiturates, or narcotics).

Hypersensitivity: Purpura; photosensitivity; rash; urticaria, necrotizing angiitis (vasculitis, cutaneous vasculitis); fever; respiratory distress, including pneumonitis, anaphylactic reactions.

Other: Hyperglycemia, glycosuria; hyperuricemia, muscle spasm; weakness; restlessness; transient blurred vision.

Whenever adverse reactions are moderate or severe, thiazide dosage should be reduced or therapy withdrawn.

5112/985

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New York, NY 10017

ORGANIZING A MEDICAL STAFF

DAVID M. ZACKS AND SUSAN L. KUPFERBERG

A nationwide trend toward physicians' organizations.

THE MEDICAL STAFF is the traditional vehicle through which physicians voice their opinions at the hospitals in which they work. Depending on the hospital, it may be an important mechanism for addressing issues involving physician/hospital relationships. Nevertheless, there are limitations as to what a medical staff can accomplish.

Medical staff members are automatically represented by the organization, regardless of their opinions or whether they desire to become involved in hospital affairs. Because members are not self-selecting, there will inevitably be a large number who are not involved, and there are bound to be widely diverging opinions. This weakens the voice of the medical staff. There are also many matters of interest to physicians which are unrelated to typical medical staff issues. For these reasons, and others, physicians are becoming increasingly interested in organizing independent groups to address their concerns.

A physicians' organization, in the general sense, is a vehicle or mechanism for obtaining and disseminating information, for sharing ideas concerning developments in the practice of medicine, and for creating and preserving a high-quality practice for its members. The options available to such groups are many.

A physicians' organization is a vehicle for obtaining and disseminating information, for sharing ideas concerning developments in the practice of medicine, and for creating and preserving a high-quality practice for its members.

A physicians' organization provides a means for taking political action, both in the community and in the hospital internally. The organization can analyze current issues which affect its members and develop a position on each issue. By voicing its opinions as a unified body, there is potential for a great deal of clout. Internally, the same opportunity is available. There may be fewer constraints on a physicians' organization than on a medical staff in expressing opinions to administrators and/or hospital authority members, because the organization is independent of and from the hospital.

The physicians' organization can effectively enhance the image of physicians in the community. The involvement of an organization (as opposed to an individual) in community affairs is not only much more visible but also more influential. Task forces within the organization can devote themselves to improving physician/patient relationships and to facilitating community service by physicians. The group can also develop a marketing strategy and promote the services of its members.

One of the primary reasons for organizing is to facilitate and promote business ventures by physicians. The physicians' organization forms a base from which to draw resources in the development of ventures and allows members to obtain information concerning investment opportunities. Some potential business ventures include the establishment of laboratories or clinics, the operation of medically related businesses (e.g., leasing

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equipment, providing home health care), employee leasing, and management or acquisition of hospitals or clinics.

The pooling of resources (members are usually charged dues) enables the group to undertake many tasks they otherwise would not pursue. The group can hire counsel to advise them on matters involving the formation of and membership in PPOs or HMOs, contracting, restructuring, and joint ventures with other physicians or with hospitals. Counsel can also serve to keep members generally abreast of developments in the law.

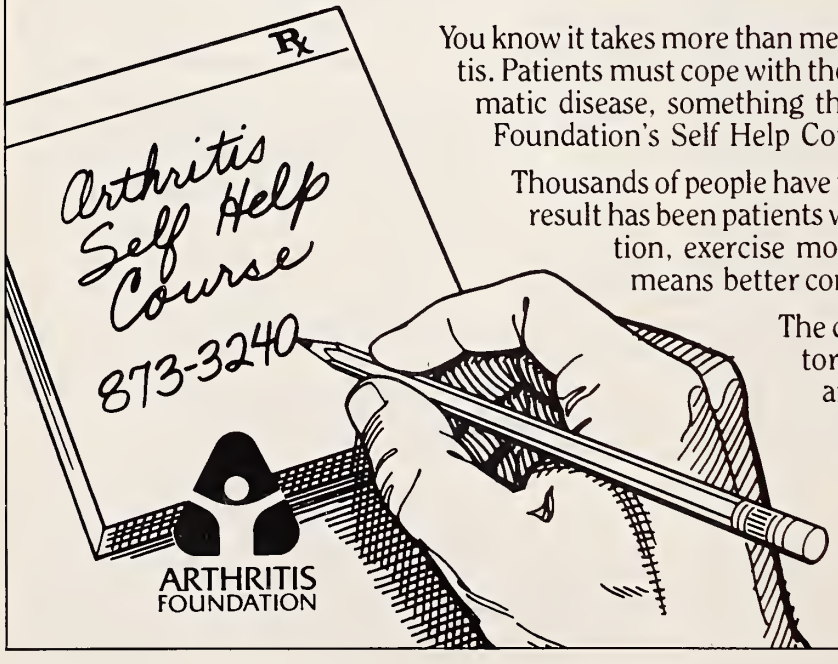
The ability to hire administrative staff can be a great advantage. Staff can be used to compile and distribute information on current events, to conduct surveys, to facilitate communication among members by writing and distributing a newsletter, and by taking care of all official communications among members. Public relations can also be handled by a staff, in lieu of hiring public relations specialists.

One of the primary reasons for organizing is to facilitate and promote business ventures by physicians.

Finally, there are tremendous advantages to hospitals. The enhanced public image of the physicians which is achieved through community involvement or marketing/public relations is of great benefit to the hospital. Additionally, physicians who are members of organizations feel that they have a voice and a means of expressing their concerns through an independent body. This gives them a greater sense of fairness and fosters the cooperation which is so essential to the well-being of patients, physicians, and the hospital. ■

IF YOU DIAGNOSE ARTHRITIS

PART OF THE TREATMENT CAN BE THE ARTHRITIS SELF HELP COURSE



You know it takes more than medication to successfully treat arthritis. Patients must cope with the many aspects of their chronic rheumatic disease, something they can learn to do at the Arthritis Foundation's Self Help Course.

Thousands of people have taken this six-week course. And the result has been patients who better understand their condition, exercise more and experience less pain. That means better compliance with prescribed treatment.

The course is taught by certified instructors, and specific treatment questions are always referred to you.

Recommend the Arthritis Self Help Course today. Call the Georgia Chapter of the Arthritis Foundation for more information at (404) 873-3240.


AFTER BREAKTHROUGH BLEEDING AND AMENORRHEA...
SHE'S ABOUT TO GIVE UP ON ORAL CONTRACEPTION.
NORLESTRIN®
1 mg norethindrone acetate and 50 mcg ethinyl estradiol tablets, USP 1/50
BECAUSE SOMETIMES A 50 IS PREFERABLE.
See next page for brief summary of prescribing information.

Brief Summary of Prescribing Information
NORLESTRIN® (norethindrone acetate and ethinyl estradiol tablets, USP)

See section under **Special Notes on Administration and HOW SUPPLIED.**
Before prescribing, please see full prescribing information. A Brief Summary follows.

DESCRIPTION
Norlestrin Products are progestogen-estrogen combinations.

INDICATIONS AND USAGE
Norlestrin Products are indicated for the prevention of pregnancy in women who elect to use oral contraceptives as a method of contraception.

In clinical trials with Norlestrin 1/50 involving 25,983 therapy cycles, there was a pregnancy rate of 0.05 per 100 woman-years; in clinical trials with Norlestrin 2.5/50 involving 96,388 cycles, there was a pregnancy rate of 0.22 per 100 woman-years.

Dose-Related Risk of Thromboembolism from Oral Contraceptives: Studies have shown a positive association between the dose of estrogens in oral contraceptives and the risk of thromboembolism. It is prudent and in keeping with good principles of therapeutics to minimize exposure to estrogen. The oral contraceptive prescribed for any given patient should be that product which contains the least amount of estrogen that is compatible with an acceptable pregnancy rate and patient acceptance.

CONTRAINDICATIONS
1. Thrombophlebitis or thromboembolic disorders
2. A past history of deep-vein thrombophlebitis or thromboembolic disorders
3. Cerebral vascular or coronary artery disease
4. Known or suspected carcinoma of the breast
5. Known or suspected estrogen-dependent neoplasia
6. Undiagnosed abnormal genital bleeding
7. Known or suspected pregnancy (See WARNING No. 5)
8. Benign or malignant liver tumor which developed during the use of oral contraceptives or other estrogen-containing products.

WARNINGS

Cigarette smoking increases the risk of serious cardiovascular side effects from oral contraceptive use. The risk increases with age and with heavy smoking (15 or more cigarettes per day) and is quite marked in women over 35 years of age. Women who use oral contraceptives should be strongly advised not to smoke.

The use of oral contraceptives is associated with increased risk of several serious conditions including thromboembolism, stroke, myocardial infarction, hepatic adenoma, gallbladder disease, and hypertension. Practitioners prescribing oral contraceptives should be familiar with the following information relating to these risks.

1. *Thromboembolic Disorders and Other Vascular Problems.* An increased risk of thromboembolic and thrombotic disease associated with the use of oral contraceptives is well-established. Studies have demonstrated an increased risk of fatal and nonfatal venous thromboembolism and stroke, both hemorrhagic and thrombotic.

Cerebrovascular Disorders: In a collaborative study in women with and without predisposing causes, it was estimated that the risk of hemorrhagic stroke was 2.0 times greater in users than nonusers, and the risk of thrombotic stroke was 4.0 to 9.5 times greater.

Myocardial Infarction: An increased risk of myocardial infarction associated with oral contraceptives has been reported confirming a previously suspected association. These studies found that the greater the number of underlying risk factors (cigarette smoking, hypertension, hypercholesterolemia, obesity, diabetes, history of preeclamptic toxemia) for coronary artery disease, the higher the risk of developing myocardial infarction, regardless of whether the patient was an oral contraceptive user or not. Oral contraceptives, however, were found to be a clear additional risk factor.

It has been estimated that users who do not smoke (smoking is considered a major predisposing condition to myocardial infarction) are about twice as likely to have a fatal myocardial infarction as nonusers who do not smoke. Oral contraceptive users who are smokers have about a fivefold increased risk of fatal infarction compared to users who do not smoke, but about a tenfold to twelvefold increased risk compared to nonusers who do not smoke. The amount of smoking is also an important factor.

Risk of Dose: In an analysis of data, British investigators concluded that the risk of thromboembolism, including coronary thrombosis, is directly related to the dose of estrogen used in oral contraceptives; however, the quantity of estrogen may not be the sole factor involved.

Persistence of Risk: Two studies have suggested that an increased risk may persist for as long as 6 years after discontinuation of oral contraceptive use for cerebrovascular disease and 9 years for myocardial infarction. In addition, a prospective study suggested the persistence of risk for subarachnoid hemorrhage.

Estimate of Excess Mortality from Circulatory Diseases: The risk of diseases of the circulatory system is concentrated in older women, in those with a long duration of use, and in cigarette smokers.

A study of available data from a variety of sources concluded that the mortality associated with all methods of birth control is low and below that associated with childbirth, with the exception of oral contraceptives in women over 40 who smoke.

The risk of thromboembolic and thrombotic diseases associated with oral contraceptives increases with age after approximately age 30 and, for myocardial infarction, is further increased by hypertension, hypercholesterolemia, obesity, diabetes, or history of preeclamptic toxemia, and especially by cigarette smoking.

The physician and the patient should be alert to the earliest manifestations of thromboembolic and thrombotic disorders. Should any occur or be suspected, the drug should be discontinued immediately.

A fourfold to sixfold increased risk of postsurgery thromboembolic complications has been reported in users. If feasible, oral contraceptives should be discontinued at least four weeks before surgery of a type associated with an increased risk of thromboembolism or prolonged immobilization.

2. *Ocular Lesions.* Neuro-ocular lesions, such as optic neuritis or retinal thrombosis, have been associated with the use of oral contraceptives. Discontinue the oral contraceptive if there is unexplained sudden or gradual, partial, or complete loss of vision; onset of proptosis or diplopia; papilledema; or retinal vascular lesions.

3. *Carcinoma.* Long-term continuous administration of estrogen in certain animal species increases the frequency of carcinoma of the breast, cervix, vagina, and liver.

In humans, an increased risk of endometrial carcinoma associated with the prolonged use of exogenous estrogen in postmenopausal women has been reported. However, there is no evidence suggesting increased risk of endometrial cancer in users of conventional combination or progestogen-only oral contraceptives.

Studies found no evidence of increase in breast cancer in women taking oral contraceptives; however, an excess risk in users with documented benign breast disease was reported.

There is no confirmed evidence of an increased risk of cancer associated with oral contraceptives. Close clinical surveillance of users is, nevertheless, essential. In cases of undiagnosed persistent or recurrent abnormal vaginal bleeding, appropriate diagnostic measures should be taken to rule out malignancy. Women with a strong family history of breast cancer, or who have breast nodules, fibrocystic disease, or abnormal mammograms, should be monitored with particular care.

4. *Hepatic Tumors.* Benign hepatic adenomas have been found to be associated with oral contraceptives. Because hepatic adenomas may rupture and may cause death through intra-abdominal hemorrhage, they should be considered in women presenting abdominal pain and tenderness, abdominal mass, or shock.

A few cases of hepatocellular carcinoma have been reported in women taking oral contraceptives. The relationship of these drugs to this type of malignancy is not known at this time.

5. *Usage in or Immediately Preceding Pregnancy; Birth Defects in Offspring, and Malignancy in Female Offspring.* During early pregnancy, female sex hormones may seriously damage the offspring.

An increased risk of congenital anomalies, including heart defects and limb defects, has been reported with the use of oral contraceptives in pregnancy.

There is some evidence that triploidy and possible other types of polyploidy are increased among abortuses from women who become pregnant soon after ceasing oral contraceptives.

Pregnancy should be ruled out before continuing an oral contraceptive in any patient who has missed two consecutive menstrual periods. If the patient has not adhered to the schedule, the possibility of pregnancy should be considered at the time of the first missed period, and oral contraceptives should be withheld until pregnancy has been ruled out. If pregnancy is confirmed, the patient should be apprised of the potential risks to the fetus and the advisability of continuation of the pregnancy should be discussed.

Women who discontinue oral contraceptives with the intent of becoming pregnant should use an alternate form of contraception for a period of time before attempting to conceive.

Administration of progestogen-only or progestogen-estrogen combinations to induce withdrawal bleeding should not be used as a test of pregnancy.

6. *Gallbladder Disease.* Studies report an increased risk of surgically confirmed gallbladder disease in users of oral contraceptives.

7. *Carbohydrate and Lipid Metabolic Effects.* Because decreased glucose tolerance has been observed in a significant percentage of patients, prediabetic and diabetic patients should be carefully observed while receiving oral contraceptives.

An increase in triglycerides and total phospholipids has been observed.

8. *Elevated Blood Pressure.* An increase in blood pressure has been reported in patients receiving oral contraceptives. The prevalence in users increases with longer exposure. Age is also strongly correlated with development of hypertension. Women who previously have had hypertension during pregnancy may be more likely to develop elevation of blood pressure.

9. *Headache.* Onset or exacerbation of migraine or development of headache of a new pattern which is recurrent, persistent, or severe, requires discontinuation of oral contraceptives.

10. *Bleeding Irregularities.* Breakthrough bleeding, spotting, and amenorrhea are frequent reasons for patients discontinuing oral contraceptives. In breakthrough bleeding, nonfunctional causes should be borne in mind. In undiagnosed abnormal bleeding from the vagina, adequate diagnostic measures are indicated to rule out pregnancy or malignancy.

Women with a past history of oligomenorrhea or secondary amenorrhea, or young women without regular cycles should be advised that they may have a tendency to remain anovulatory or to become amenorrheic after discontinuation of oral contraceptives.

11. *Ectopic Pregnancy.* Ectopic as well as intrauterine pregnancy may occur in contraceptive failures.

12. *Breast-Feeding.* Oral contraceptives may interfere with lactation. Furthermore, a small fraction of the hormonal agents in oral contraceptives has been identified in the milk of mothers receiving these drugs.

PRECAUTIONS
1. A complete medical and family history should be taken prior to the initiation of oral contraceptives. The pretreatment and periodic physical examinations should include special reference to blood pressure, breasts, abdomen, and pelvic organs, including Papanicolaou smear and relevant laboratory tests. As a general rule, oral contraceptives should not be prescribed for longer than one year without another examination.
2. Preexisting uterine leiomyomata may increase in size.
3. Patients with a history of psychic depression should be carefully observed and the drug discontinued if depression recurs to a serious degree.
4. Oral contraceptives may cause fluid retention and should be prescribed with caution, and only with careful monitoring, in patients with conditions which might be aggravated.
5. Patients with a past history of jaundice during pregnancy have an increased risk of recurrence of jaundice. If jaundice develops, the medication should be discontinued.
6. Steroid hormones may be poorly metabolized and should be administered with caution in patients with impaired liver function.
7. Users may have disturbances in normal tryptophan metabolism, which may result in a relative pyridoxine deficiency.
8. Serum folate levels may be depressed.
9. The pathologist should be advised of oral contraceptive therapy when relevant specimens are submitted.
10. Certain endocrine and liver function tests and blood components may be affected.
(a) Increased sulfobromophthalein retention. (b) Increased prothrombin and factors VII, VIII, IX, and X; decreased antithrombin 3; increased norepinephrine-induced platelet aggregability (c) Increased thyroid-binding globulin (TBG) leading to increased circulating total thyroid hormone. (d) Decreased pregnanediol excretion. (e) Reduced response to metyrapone test.

Drug Interactions: Reduced efficacy and increased incidence of breakthrough bleeding have been associated with concomitant use of rifampin. A similar association has been suggested with barbiturates, phenylbutazone, phenytoin sodium, tetracycline, and ampicillin.

ADVERSE REACTIONS
An increased risk of the following serious adverse reactions has been associated with oral contraceptives: thrombophlebitis; pulmonary embolism; coronary thrombosis; cerebral thrombosis; cerebral hemorrhage; hypertension; gallbladder disease; benign hepatomas; congenital anomalies.

There is evidence of an association between the following conditions and the use of oral contraceptives, although additional confirmatory studies are needed: mesenteric thrombosis, neuro-ocular lesions, eg, retinal thrombosis and optic neuritis.

The following adverse reactions have been reported in patients receiving oral contraceptives and are believed to be drug related: nausea and/or vomiting, usually the most common adverse reactions, occur in approximately 10% or less of patients during the first cycle. Other reactions, as a general rule, are seen much less frequently or only occasionally: gastrointestinal symptoms; breakthrough bleeding; spotting; change in menstrual flow; dysmenorrhea; amenorrhea during and after treatment; temporary infertility after discontinuance of treatment; edema; chloasma or melasma; breast changes; change in weight; change in cervical erosion and cervical secretion; possible diminution in lactation when given immediately postpartum; cholestatic jaundice; migraine; increase in size of uterine leiomyomata; rash (allergic); mental depression; reduced tolerance to carbohydrates; vaginal candidiasis; change in corneal curvature; intolerance to contact lenses.

The following adverse reactions have been reported and the association has been neither confirmed nor refuted: premenstrual-like syndrome; cataracts; changes in libido; chorea; changes in appetite; cystitis-like syndrome; headache; nervousness; dizziness; hirsutism; loss of scalp hair; erythema multiforme; erythema nodosum; hemorrhagic eruption; vaginitis; porphyria.

Special Notes on Administration
Menstruation usually begins two or three days, but may begin as late as the fourth or fifth day, after discontinuing medication.

After several months on treatment, bleeding may be reduced to a point of virtual absence; reduced flow may be a result of medication and not indicative of pregnancy.

HOW SUPPLIED
Norlestrin 21 1/50 is available in compacts each containing 21 tablets. Each tablet contains 1 mg of norethindrone acetate and 50 mcg of ethinyl estradiol. Available in packages of five compacts and packages of five refills.

Norlestrin 21 2.5/50 is available in compacts each containing 21 tablets. Each tablet contains 2.5 mg of norethindrone acetate and 50 mcg of ethinyl estradiol. Available in packages of five compacts and packages of five refills.

Norlestrin Fe 1/50 is available in compacts each containing 21 yellow tablets and 7 brown tablets. Each yellow tablet contains 1 mg of norethindrone acetate and 50 mcg of ethinyl estradiol. Each brown tablet contains 75 mg of ferrous fumarate, USP. Available in packages of five compacts and packages of five refills.

Norlestrin FE 2.5/50 is available in compacts each containing 21 pink tablets and 7 brown tablets. Each pink tablet contains 2.5 mg of norethindrone acetate and 50 mcg of ethinyl estradiol. Each brown tablet contains 75 mg of ferrous fumarate, USP. Available in packages of five compacts and packages of five refills.

Norlestrin 28 1/50 is available in compacts each containing 21 yellow tablets and 7 white inert tablets. Each yellow tablet contains 1 mg of norethindrone acetate and 50 mcg of ethinyl estradiol. Available in packages of five compacts and packages of five refills.

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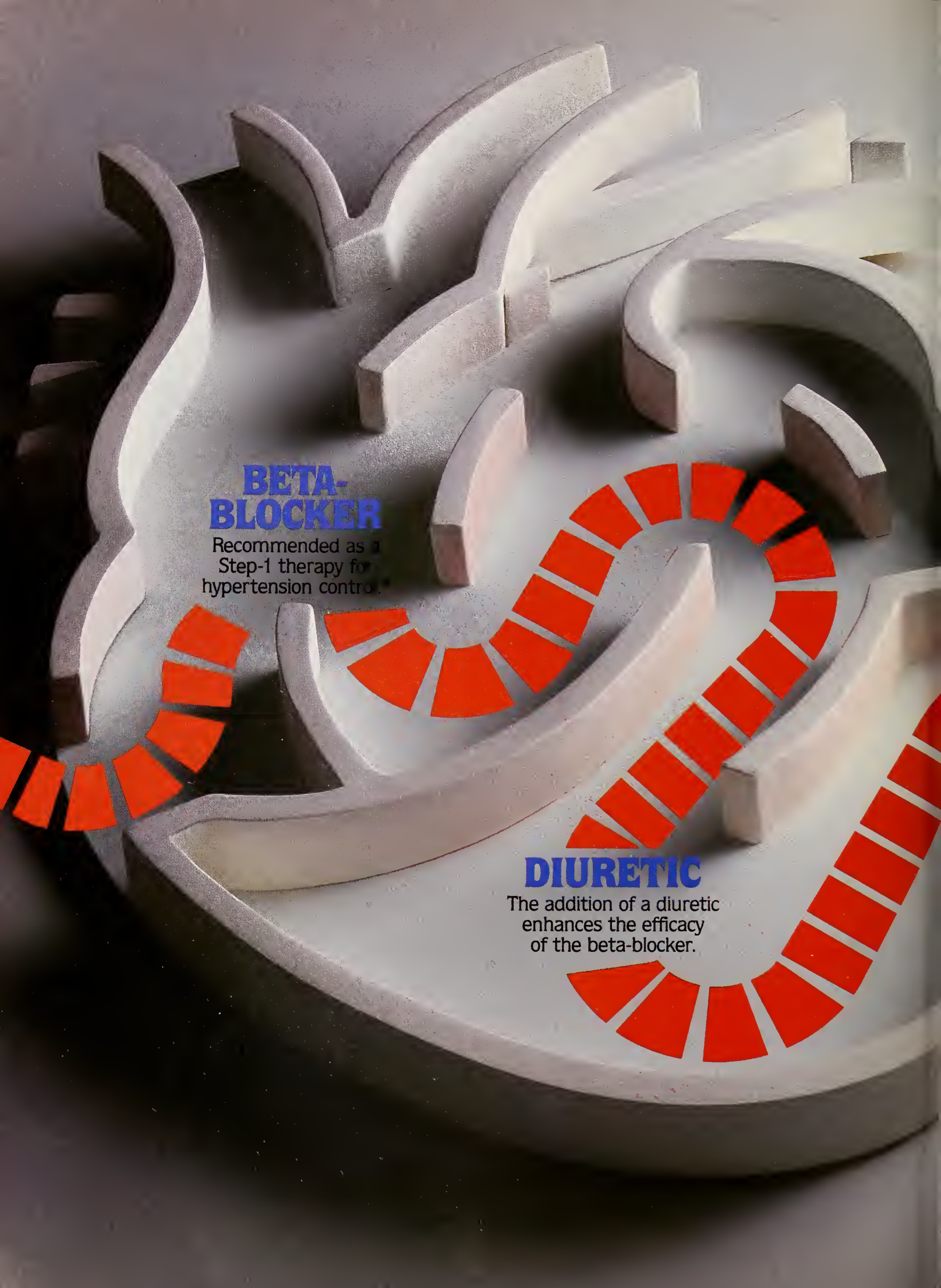
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The Logical Path to Compliance




BETA-
BLOCKER
Recommended as a
Step-1 therapy for
hypertension control.*
DIURETIC
The addition of a diuretic
enhances the efficacy
of the beta-blocker.

IN HYPERTENSION END POINT:

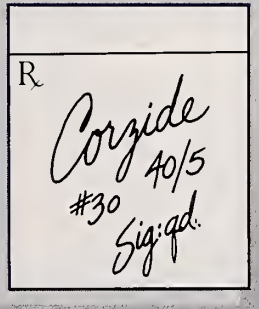
CONTROL, COMPLIANCE, CONVENIENCE

When hypertension control is complicated by the need for a beta-blocker plus a thiazide, CORZIDE® simplifies patient compliance with reliable once-a-day dosing in a single tablet.

CORZIDE®

(nadolol-bendroflumethiazide tablets)

Makes good sense



SQUIBB®

Innovators in cardiovascular medicine

*Joint National Committee on Detection, Evaluation and Treatment of High Blood Pressure: The 1984 report of the Joint National Committee on Detection, Evaluation and Treatment of High Blood Pressure. Arch Intern Med 144:1045-1057, 1984.

Please see brief summary of prescribing information on following page

CORZIDE®

(nadolol-bendroflumethiazide tablets)

CORZIDE® 40/5
CORZIDE® 80/5
Nadolol-Bendroflumethiazide Tablets

DESCRIPTION: CORZIDE (Nadolol-Bendroflumethiazide Tablets) for oral administration combines two antihypertensive agents: CORGARD® (nadolol), a nonselective beta-adrenergic blocking agent, and NATURETIN® (bendroflumethiazide), a thiazide diuretic-antihypertensive. Formulations: 40 mg and 80 mg nadolol per tablet combined with 5 mg bendroflumethiazide.

CONTRAINDICATIONS: Nadolol — Bronchial asthma, sinus bradycardia and greater than first degree conduction block, cardiogenic shock, and overt cardiac failure (see WARNINGS). **Bendroflumethiazide** — Anuria, and in those with previous hypersensitivity to bendroflumethiazide or other sulfonamide-derived drugs.

WARNINGS: Nadolol — Cardiac Failure — Sympathetic stimulation may be a vital component supporting circulatory function in patients with congestive heart failure, and its inhibition by beta-blockade may precipitate more severe failure. Although beta-blockers should be avoided in overt congestive heart failure, if necessary, they can be used with caution in patients with a history of failure who are well compensated, usually with digitalis and diuretics. Beta-adrenergic blocking agents do not abolish the inotropic action of digitalis on heart muscle. IN PATIENTS WITHOUT A HISTORY OF HEART FAILURE, continued use of beta-blockers can, in some cases, lead to cardiac failure. Therefore, at the first sign or symptom of heart failure, digitalize and/or give diuretics, and closely observe response, or discontinue nadolol (gradually, if possible).

Exacerbation of Ischemic Heart Disease Following Abrupt Withdrawal — Hypersensitivity to catecholamines has been observed in patients withdrawn from beta-blocker therapy; exacerbation of angina and, in some cases, myocardial infarction have occurred after *abrupt* discontinuation of such therapy. When discontinuing chronic use of nadolol, particularly in patients with ischemic heart disease, gradually reduce dosage over a 1- to 2-week period and carefully monitor the patient. Reinstitute nadolol promptly (at least temporarily) and take other measures appropriate for management of unstable angina if angina markedly worsens or acute coronary insufficiency develops. Warn patients not to interrupt or discontinue therapy without physician's advice. Because coronary artery disease is common and may be unrecognized, it may be prudent not to discontinue nadolol therapy abruptly even in patients treated only for hypertension.

Nonallergic Bronchospasm (e.g., chronic bronchitis, emphysema) — PATIENTS WITH BRONCHOSPASTIC DISEASES SHOULD IN GENERAL NOT RECEIVE BETA-BLOCKERS. Administer nadolol with caution since it may block bronchodilation produced by endogenous or exogenous catecholamine stimulation of $beta_2$ receptors. **Major Surgery** — Because beta blockade impairs the ability of the heart to respond to reflex stimuli and may increase the risks of general anesthesia and surgical procedures, resulting in protracted hypotension or low cardiac output, it has generally been suggested that such therapy should be withdrawn several days prior to surgery. Recognition of the increased sensitivity to catecholamines of patients recently withdrawn from beta-blocker therapy, however, has made this recommendation controversial. If possible, withdraw beta-blockers well before surgery takes place. In emergency surgery, inform the anesthesiologist that the patient is on beta-blocker therapy. Use of beta-receptor agonists such as isoproterenol, dopamine, dobutamine, or levarterenol can reverse the effects of nadolol. Difficulty in restarting and maintaining the heart beat has also been reported with beta-adrenergic receptor blocking agents. **Diabetes and Hypoglycemia** — Beta-adrenergic blockade may prevent the appearance of premonitory signs and symptoms (e.g., tachycardia and blood pressure changes) of acute hypoglycemia. This is especially important with labile diabetics. Beta-blockade also reduces release of insulin in response to hyperglycemia; therefore, it may be necessary to adjust dose of antidiabetic drugs. **Thyrotoxicosis** — Beta-adrenergic blockade may mask certain clinical signs (e.g., tachycardia) of hyperthyroidism. To avoid abrupt withdrawal of beta-adrenergic blockade which might precipitate a thyroid storm, carefully manage patients suspected of developing thyrotoxicosis.

Bendroflumethiazide — Use with caution in severe renal disease. In patients with renal disease, azotemia may be precipitated. With impaired renal function, effects of the drug may be cumulative. Use with caution in impaired hepatic function or progressive liver disease, since minor alterations of fluid and electrolyte balance may precipitate hepatic coma. Sensitivity reactions may occur in patients with a history of allergy or bronchial asthma. Possibility of exacerbation or activation of systemic lupus erythematosus has been reported.

PRECAUTIONS: General — Nadolol — Use with caution in patients with impaired hepatic or renal function (see DOSAGE AND ADMINISTRATION).

Bendroflumethiazide — At appropriate intervals, perform serum electrolytes determination to detect possible electrolyte imbalance warning signs of which are dryness of mouth, thirst, weakness, lethargy, drowsiness, restlessness, muscle pains or cramps, muscular fatigue, hypotension, oliguria, tachycardia, and G.I. disturbances such as nausea and vomiting. Observe patients for clinical signs of fluid or electrolyte imbalance; namely, hyponatremia, hypochloremic alkalosis, hypokalemia. Serum and urine electrolyte determinations are particularly important when the patient is vomiting excessively or receiving parenteral fluids. Drugs such as digitalis may influence serum electrolytes. Hypokalemia may develop, especially with brisk diuresis, in presence of severe cirrhosis. Interference with adequate oral electrolyte intake will also contribute to hypokalemia. Response of the heart to toxic effects of digitalis can be exaggerated with hypokalemia. Use potassium supplements such as high potassium foods to avoid or treat hypokalemia. Any chloride deficit is generally mild and usually does not require specific therapy except under extraordinary circumstances (as in liver or renal disease). Dilutional hyponatremia may occur in edematous patients in hot weather; appropriate therapy is water restriction rather than salt administration except in rare instances when the hyponatremia is life threatening. In actual salt depletion, appropriate replacement is the therapy of choice.

Hyperuricemia may occur or frank gout may be precipitated in certain thiazide-treated patients. Latent diabetes mellitus may become manifest during thiazide therapy. Antihypertensive effects of bendroflumethiazide may be enhanced in the postsympathectomy patient.

Careful reappraisal of therapy and consideration given to withholding or stopping diuretic therapy is necessary if rising nonprotein nitrogen or BUN (indicative of progressive renal impairment) occurs. Thiazides may decrease serum PBI levels without signs of thyroid disturbance. Thiazides decrease calcium excretion. Pathologic changes in parathyroid gland with hypercalcemia and hypophosphatemia have been occasionally observed with prolonged therapy. Common complications of hyperparathyroidism have not been seen.

Information for Patients — Warn patients, especially those with evidence of coronary artery insufficiency, against interruption or discontinuation of nadolol without physician's advice. Although cardiac failure rarely occurs in properly selected patients, advise patients being treated with beta-adrenergic blocking agents to consult physician at the first sign or symptom of impending failure. Advise patients of proper course if dose inadvertently missed.

Laboratory Tests — Regularly monitor serum and urine electrolyte levels (see WARNINGS, *Bendroflumethiazide,* and PRECAUTIONS, *General, Bendroflumethiazide).*

Drug Interactions — Nadolol — When administered concurrently the following drugs may interact with beta-adrenergic blocking agents: **Anesthetics, general** — exaggeration of anesthetic-induced hypotension (see WARNINGS, *Nadolol, Major Surgery).* **Antidiabetic drugs (oral agents and insulin)** — hypoglycemia or hyperglycemia; adjust antidiabetic drug dosage accordingly (see WARNINGS, *Nadolol, Diabetes and Hypoglycemia).* **Catecholamine-depleting drugs (e.g., reserpine)** — additive effect; monitor closely for evidence of hypotension and/or excessive bradycardia.

Bendroflumethiazide — When administered concurrently the following drugs may interact with thiazide diuretics: **Alcohol, barbiturates, or narcotics** — may potentiate orthostatic hypotension. **Antidiabetic drugs (oral agents and insulin)** — thiazide-induced hyperglycemia may require adjustment of antidiabetic drug dosage. **Other antihypertensive drugs** — additive or potentiated effect. **Corticosteroids, ACTH** — intensified electrolyte depletion, particularly hypokalemia. **Ganglionic or peripheral adrenergic blocking drugs** — potentiated effect. **Preanesthetic and anesthetic agents** — effects may be potentiated; adjust dosage accordingly. **Pressor amines (e.g., norepinephrine)** — possible decrease response but not sufficient to preclude their use. **Skeletal muscle relaxants, nondepolarizing (e.g., tubocurarine)** — possible increased response.

Drug/Laboratory Test Interactions — Discontinue thiazides before tests for parathyroid function (see PRECAUTIONS, *General, Bendroflumethiazide).*

Carcinogenesis, Mutagenesis, Impairment of Fertility — Nadolol — In 1 to 2 years oral toxicologic studies in mice, rats, and dogs, nadolol did not produce significant toxic effects. In 2-year oral carcinogenic studies in rats and mice, nadolol did not produce neoplastic, preneoplastic, or nonneoplastic pathologic lesions. **Bendroflumethiazide** — Long-term studies in animals have not been performed.

Pregnancy — Teratogenic Effects — Nadolol — Category C. In animal reproduction studies with nadolol, evidence of embryo- and fetotoxicity was found in rabbits, but not in rats or hamsters, at doses 5 to 10 times greater (on a mg/kg basis) than the maximum indicated human dose; no teratogenic potential was seen in any of these species. There are no well-controlled studies in pregnant women; therefore, use nadolol in pregnant women only if potential benefit justifies potential risk to the fetus. **Bendroflumethiazide** — Category C. Animal reproduction studies have not been conducted. This drug's effect on the fetus when administered to a pregnant woman or its effect on reproductive capacity is not known. Bendroflumethiazide should be given to a pregnant woman only if clearly needed. **Nonteratogenic Effects** — Since thiazides cross the placental barrier and appear in cord blood, weigh anticipated benefit of the drug in pregnant women against possible hazards to the fetus; these hazards include fetal or neonatal jaundice, thrombocytopenia, and possibly other reactions which have occurred in adults.

Nursing Mothers — Both nadolol and bendroflumethiazide are excreted in human milk. Because of the potential for serious adverse reactions in nursing infants either discontinue nursing or discontinue therapy, taking into account the importance of CORZIDE (Nadolol-Bendroflumethiazide Tablets) to the mother.

Pediatric Use — Safety and effectiveness in children have not been established.

ADVERSE REACTIONS: Nadolol — Most adverse effects have been mild and transient and have rarely required nadolol withdrawal. **Cardiovascular** — Bradycardia with heart rates of less than 60 beats per minute occurs commonly, and heart rates below 40 beats per minute and/or symptomatic bradycardia were seen in about 2 of 100 patients. Symptoms of peripheral vascular insufficiency, usually of the Raynaud type, have occurred in approximately 2 of 100 patients. Cardiac failure, hypotension, and rhythm/conduction disturbances have each occurred in about 1 of 100 patients. Single instances of first degree and third degree heart block have been reported, intensification of AV block is a known effect of beta-blockers (see also CONTRAINDICATIONS, WARNINGS, and PRECAUTIONS). **Central Nervous System** — Dizziness or fatigue reported in approximately 2 of 100 patients; paresthesias, sedation, and change in behavior reported in approximately 6 of 1000 patients. **Respiratory** — Bronchospasm reported in approximately 1 of 1000 patients (see CONTRAINDICATIONS and WARNINGS). **Gastrointestinal** — Nausea, diarrhea, abdominal discomfort, constipation, vomiting, indigestion, anorexia, bloating, and flatulence each reported in 1 to 5 of 1000 patients. **Miscellaneous** — Each of the following reported in 1 to 5 of 1000 patients: rash; pruritus; headache; dry mouth, eyes, or skin; impotence or decreased libido; facial swelling; weight gain; slurred speech; cough; nasal stuffiness; sweating; tinnitus; blurred vision. Although relationship to drug usage is not clear, sleep disturbances have been reported. The oculomucocutaneous syndrome associated with practolol has not been reported with nadolol. The following adverse reactions may also occur: **Central Nervous System** — reversible mental depression progressing to catatonia; visual disturbances; hallucinations; an acute reversible syndrome characterized by disorientation for time and place, short-term memory loss; emotional lability with slightly clouded sensorium, decreased performance on neuropsychometrics. **Gastrointestinal** — mesenteric arterial thrombosis; ischemic colitis. **Hematologic** — agranulocytosis; thrombocytopenic or nonthrombocytopenic purpura. **Allergic** — fever combined with aching and sore throat; laryngospasm, respiratory distress. **Miscellaneous** — reversible alopecia; Peyronie's disease; erythematous rash; arterial insufficiency.

Bendroflumethiazide — Gastrointestinal System — anorexia, gastric irritation, nausea, vomiting, cramping, diarrhea, constipation, jaundice (intrahepatic cholestatic jaundice), pancreatitis. **Central Nervous System** — dizziness, vertigo, paresthesia, headache, xanthopsia. **Hematologic** — leukopenia, agranulocytosis, thrombocytopenia, aplastic anemia. **Dermatologic-Hypersensitivity** — purpura, photosensitivity, rash, urticaria, necrotizing angiitis (vasculitis, cutaneous vasculitis). **Cardiovascular** — orthostatic hypotension may occur. **Other** — hyperglycemia, glycosuria, occasional metabolic acidosis in diabetics, hyperuricemia, allergic glomerulonephritis, muscle spasm, weakness, restlessness. Whenever adverse reactions are moderate or severe, thiazide dosage should be reduced or therapy withdrawn.

OVERDOSAGE: Nadolol may cause excessive bradycardia, cardiac failure, hypotension, or bronchospasm if overdosed. Overdosage of thiazides may cause lethargy, which may progress to coma within a few hours, with minimal depression of respiration and cardiovascular function and without evidence of serum electrolyte changes or dehydration. Gastrointestinal irritation and hypermotility may occur. Transitory increase in BUN and serum electrolyte changes may occur, especially in patients with renal impairment.

Treatment — Nadolol can be removed from the general circulation by hemodialysis. In determining duration of corrective therapy, take note of the long duration of the effect of nadolol. In addition to gastric lavage, employ the following measures, as appropriate. **Excessive Bradycardia** — Administer atropine (0.25 to 1.0 mg). If there is no response to vagal blockade, administer isoproterenol cautiously. **Cardiac Failure** — Administer a digitalis glycoside and diuretic. It has been reported that glucagon may also be useful in this situation. **Hypotension** — Administer vasopressors, e.g., epinephrine or levarterenol. (There is evidence that epinephrine may be the drug of choice.) **Bronchospasm** — Administer a $beta_2$-stimulating agent and/or a theophylline derivative. **Stupor or Coma** — Supportive therapy as warranted. **Gastrointestinal Effects** — Symptomatic treatment as needed. **BUN and/or Serum Electrolyte Abnormalities** — Institute supportive measures as required to maintain hydration, electrolyte balance, respiration, and cardiovascular and renal function.

DOSAGE AND ADMINISTRATION: DOSAGE MUST BE INDIVIDUALIZED. Patients with renal failure require adjustment in dosing interval; see package insert for dosage in these patients.

Consult package insert before prescribing CORZIDE (Nadolol-Bendroflumethiazide Tablets).

HOW SUPPLIED: Available as scored tablets containing 40 mg nadolol combined with 5 mg bendroflumethiazide and 80 mg nadolol combined with 5 mg bendroflumethiazide in bottles of 100.

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REGISTRATION FORM

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November 22-24, 1985

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- ☐ Ob/Gyn
- ☐ Ophthalmology
- ☐ Otolaryngology/Head & Neck Surgery
- ☐ Pathology
- ☐ Plastic Surgery
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RISK MANAGEMENT II SEMINARS:

- ☐ Georgia Society of Internal Medicine
- ☐ Georgia Neurosurgical Society
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REGISTRATION FEES (PLEASE CHECK)

SCIENTIFIC SESSIONS:	MAG Member	Non-Member
Physician	☐ $75	☐ $100
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Student	☐ no fee	☐ $ 10
Other Health Professional		☐ $ 20
Program Chairmen or Speakers		☐ no fee

RISK MANAGEMENT:

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*Priority in attendance will be given to members o Sponsoring Society.

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MAG Scientific Assembly 1985

PRELIMINARY PROGRAM

REGISTRATION INFORMATION

Your registration form for the 1985 MAG Scientific Assembly may be found in this issue of the *Journal*. If you need other forms, call the MAG office in Atlanta (876-7535 or toll free in Georgia: 800/282-0224). We will gladly mail you as many as you need. Early registration is advised. General Registration desks will also be open during the Scientific Assembly.

REGISTRATION FEE FOR PHYSICIANS

SCIENTIFIC SESSIONS

	MAG Member	Non-Member
Physician	$75	$100
Resident	no fee	$ 15
Student	no fee	$ 10

Other health professionals: $20
Program chairmen or speakers: no fee

RISK MANAGEMENT SEMINARS

During the Scientific Assembly at the Ritz-Carlton, the Medical Association of Georgia, in conjunction with MAG Mutual and St. Paul Insurance Companies, will hold three Risk Management Series II Seminars co-sponsored by the following Specialty Societies:

Georgia Neurosurgical Society — Friday, November 22
Georgia Chapter, American College of Surgeons — Saturday, November 23
Georgia Society of Internal Medicine — Sunday, November 24.

Member of MAG or sponsoring specialty society: $150
Non-member physician: $200

IMPORTANT: Registration for the Scientific Assembly's scientific sessions is separate from registration for a risk management seminar.

A physician who plans to attend both scientific meetings and a risk management seminar may register for both by using the registration form inserted in this *Journal,* but he/she should remit payment for both registration fees.

HOTEL RESERVATIONS

If you wish hotel accommodations, please complete and detach the bottom portion of the registration form and mail it directly to the Ritz-Carlton Buckhead Hotel. Reservations received after November 1 will be met on a space-available basis.


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ALLERGY
FRIDAY AFTERNOON

ALLERGY AND IMMUNOLOGY SOCIETY OF GEORGIA

PROGRAM CHAIRMAN: Gary Z. Lotner, M.D., Atlanta

FACULTY:

Gail Shapiro, M.D.
Clinical Professor of Pediatrics
University of Washington School of Medicine
Seattle

Peter Shapiro, D.D.S., M.S.D.
Chairman
Department of Orthodontics
University of Washington

Michael Halwig, M.D.
Atlanta

Michael Maloney, M.D.
Fellow
Department of Allergy
Medical College of Georgia
Augusta

FRIDAY, NOVEMBER 22

12:00- 1:20	**LUNCHEON — Members of the Society** Sponsored by Muro Laboratories, Inc.
1:30- 1:35	**WELCOME** Thomas F. Smith, M.D., President Allergy and Immunology Society of Georgia
1:35- 1:40	**INTRODUCTION** Gary Z. Lotner, M.D.
1:40- 2:20	**COMPLICATIONS OF ALLERGIC RHINITIS AND SINUSITIS IN CHILDREN** Gail Shapiro, M.D.
2:20- 3:05	**EFFECTS OF NASAL OBSTRUCTION ON FACIAL DEVELOPMENT** Peter Shapiro, D.D.S., M.S.D.
3:05- 3:20	**AIDS IN CHILDREN** Michael Maloney, M.D.
3:20- 3:35	**COFFEE BREAK**
3:35- 4:15	**BRONCHOPROVOCATION TESTING IN CHILDREN** Gail Shapiro, M.D.
4:15- 4:30	**RECOGNITION AND TREATMENT OF BRONCHOPULMONARY ASPERGILLOSIS** Michael Halwig, M.D.
4:30- 5:15	**BUSINESS MEETING** Members of the Allergy & Immunology Society
5:15- 6:15	**RECEPTION FOR SPEAKERS AND SOCIETY MEMBERS** Sponsored by Adams Laboratories

We wish to thank Key Pharmaceuticals, Inc. for its support of Dr. Gail Shapiro's presentations; and Glaxo, Inc., for its support of Dr. Peter Shapiro's presentation.

CHEST DISEASE
ALL DAY FRIDAY & SATURDAY MORNING

GEORGIA THORACIC SOCIETY
GEORGIA CHAPTER, AMERICAN COLLEGE OF CHEST PHYSICIANS
AMERICAN LUNG ASSOCIATION OF GEORGIA

PLANNING COMMITTEE:
Paul J. Scheinberg, M.D., Chairman
Eric G. Honig, M.D.
Edwin A. Kramer, ALAG Staff

PULMONARY PHARMACOLOGY
FRIDAY, NOVEMBER 22

FACULTY:

Roger C. Bone, M.D.
Professor and Chairman
Department of Medicine
Rush Presbyterian Medical Center
Chicago, IL

Nicholas J. Gross, M.D.
Section Chief of Pulmonary Disease
Veterans Administration Hospital
Hines, IL

Perry V. Halushka, M.D.
Professor of Pharmacology and Medicine
Medical University of South Carolina
Charleston, SC

John W. Jenne, M.D.
Section Chief of Pulmonary Disease
Veterans Administration Hospital
Hines, IL

Alan L. Plummer, M.D.
Associate Professor of Medicine
Pulmonary Section
Emory University School of Medicine
Director of Respiratory Care Services
Emory University Hospital
Atlanta

John N. Sheagren, M.D.
Associate Chairman
Department of Internal Medicine
University of Michigan Medical School
Ann Arbor, MI

8:45- 9:00	**WELCOME**
9:00-10:00	**THEOPHYLLINES** John W. Jenne, M.D.
10:00-10:45	**ANTICHOLINERGICS** Nicholas J. Gross, M.D.
10:45-11:00	**COFFEE BREAK**
11:00-12:00	**BETA AGONISTS** Alan L. Plummer, M.D.
12:00- 1:30	**LUNCH BREAK**
1:30- 2:30	**MECHANISMS OF ACTION OF GLUCOCORTICOIDS IN LUNG DISEASE** John N. Sheagren, M.D.
2:30- 3:30	**DRUGS FOR ARDS** Roger C. Bone, M.D.
3:30- 4:00	**COFFEE BREAK**
4:00- 5:00	**MECHANISMS FOR ACTION OF PROSTAGLANDINS AND PROSTOCYCLINE IN LUNG DISEASE** Perry V. Halushka, M.D.
5:00- 6:00	**RECEPTION — BUSINESS MEETING GTS and ACCP, Georgia Chapter**

PULMONARY PHARMACOLOGY SATURDAY, NOVEMBER 23

FACULTY:

Bashir A. Chaudhary, M.D.
Associate Professor of Medicine
Section of Pulmonary and Critical Care Medicine
Director, Pulmonary Diagnostic Procedures Program
Medical College of Georgia School of Medicine
Augusta

Victor Fainstein, M.D.
Associate Professor of Medicine
University of Texas Medical School
Chairman, Department of Infectious Diseases
M. D. Anderson Hospital
Houston, TX

John A. Goldman, M.D.
Staff
Northside and St. Joseph's Hospitals
Atlanta

Jonne B. Walter, M.D.
Medical Director of Respiratory Care
Georgia Baptist Medical Center
Atlanta

8:30- 9:00	**COFFEE & DANISH**
9:00- 9:45	**CALCIUM CHANNEL BLOCKERS** Jonne B. Walter, M.D.
9:45-10:30	**ROLE OF CYTOTOXIC & IMMUNOREGULATORY DRUGS IN INTERSTITIAL LUNG DISEASE** John A. Goldman, M.D.
10:30-11:45	**MANAGEMENT OF SLEEP APNEA** Bashir A. Chaudhary, M.D.
11:45-12:30	**NEWER ANTIBIOTICS** Victor Fainstein, M.D.
12:30	**ADJOURN**

We gratefully acknowledge the sponsorship of guest faculty by the following companies:

Boehringer Ingelheim — Dr. Bone
Glaxo — Dr. Fainstein
Key Pharmaceuticals — Dr. Jenne
Roche Laboratories — Dr. Sheagren
Schering — Dr. Gross
Upjohn Company — Dr. Haluska

This program has been partially funded through contributions from Aerox, Respiratory Homecare Services, Inc. (a subsidiary of Aerox Health-Care Services, Inc.); Glasrock Medical Services, the Upjohn Co., and Knoll Pharmaceuticals.

EMERGENCY MEDICINE SATURDAY MORNING

GEORGIA CHAPTER, AMERICAN COLLEGE OF EMERGENCY PHYSICIANS

PROGRAM CHAIRMAN:
Gail V. Anderson, M.D., Atlanta

FACULTY:

Scott Kirby, M.D.
Professor of Emergency Medicine
Medical College of Georgia School of Medicine
Augusta

Alan Kozarsky, M.D.
Chief of Ophthalmology
Grady Memorial Hospital
Atlanta

Marilyn McKay, M.D.
Associate Professor of Dermatology
Emory University School of Medicine
Chief of Dermatology
Grady Memorial Hospital
Atlanta

Roger Meyer, M.D., D.D.S.
Chairman, Department of Oral and Maxillofacial Surgery
Emory University School of Medicine
Atlanta

SATURDAY, NOVEMBER 23

8:30- 9:15	**ACUTE EYE PROBLEMS AND THE EMERGENCY PHYSICIAN** Alan Kozarsky, M.D.
9:15- 9:30	**QUESTIONS AND ANSWERS**
9:30-10:15	**ACUTE ORAL-SURGICAL PROBLEMS IN THE EMERGENCY DEPARTMENT** Roger Meyer, M.D., D.D.S.
10:15-10:30	**QUESTIONS AND ANSWERS**
10:30-10:45	**COFFEE BREAK**
10:45-11:30	**EMERGENCY MANAGEMENT OF THE ASTHMATIC PATIENT** Scott Kirby, M.D.
11:30-11:45	**QUESTIONS AND ANSWERS**
11:45-12:30	**DERMATOLOGY IN THE EMERGENCY DEPARTMENT** Marilyn McKay, M.D.

GASTROENTEROLOGY FRIDAY AFTERNOON

GEORGIA GASTROENTEROLOGIC SOCIETY

PROGRAM CHAIRMAN:

Theodore Hersh, M.D., Atlanta
President
Georgia Gastroenterologic Society

FACULTY:

Richard J. Amerson, M.D.
Professor of Surgery
Emory University School of Medicine
Atlanta

Irwin R. Berman, M.D.
Attending Physician in Surgery
Glynn-Brunswick Memorial Hospital
Brunswick

Michael E. Bernardino, M.D.
Professor of Radiology
Emory University School of Medicine
Atlanta

Herbert L. Bonkovsky, M.D.
Professor of Medicine
Emory University School of Medicine
Atlanta

W. Scott Brooks, Jr., M.D.
Associate Professor of Medicine
Emory University School of Medicine
Atlanta

Francisco Cardenas, M.D.
Attending Physician in Medicine
Cobb General Hospital
Austell

John T. Galambos, M.D.
Professor of Medicine
Emory University School of Medicine
Atlanta

Joseph W. Griffin, M.D.
Associate Professor of Medicine
Emory University School of Medicine
Atlanta

Michael J. Henderson, M.D.
Professor of Medicine
Emory University School of Medicine
Atlanta

Theodore Hersh, M.D.
Professor of Medicine
Emory University School of Medicine
Atlanta

Stanley P. Riepe, M.D.
Associate Professor of Medicine
Emory University School of Medicine
Atlanta

Julius Wenger, M.D.
Professor of Medicine
Emory University School of Medicine
Atlanta

FRIDAY, NOVEMBER 22

1:57- 2:00	**WELCOME**
2:00- 2:12	**URETERO-SIGMOID NEOPLASIA: A NEW SYNDROME?** Richard J. Amerson
2:12- 2:24	**"THE SCHRODER-ALVAREZ" SYNDROME: A NEW NAME FOR AN OLD CONDITION** W. Scott Brooks, Jr., M.D.
2:24- 2:36	**COLLAGENOUS COLITIS DIARRHEA: FACT OR FANCY?** Julius Wenger, M.D.
2:36- 2:48	**PSEUDOMONAS FECAL OVERGROWTH: YET ANOTHER CAUSE OF MONTEZUMA'S REVENGE** Theodore Hersh, M.D.
2:48- 3:00	**PRURITIS, SCLEROSING CHOLANGITIS AND PLASMAPHERESIS: NOVEL THERAPY** Joseph W. Griffin, M.D.

3:30- 3:30	**CINEDEFECOGRAPHY: FRESH AIR IN THE EVALUATION OF CONSTIPATION** Irwin R. Berman, M.D.
3:30- 3:40	**COFFEE BREAK**
3:40- 3:55	**MELTING OBESITY WITH THE GASTRIC BALLOON: TECHNIQUE AND PRELIMINARY OBSERVATIONS** Stanley P. Riepe, M.D.
3:55- 4:10	**EUROPEAN ENDOBILIARY SURGERY: OBSERVATIONS OF A PEACH STATE TRAVELLER** Francisco Cardenas, M.D.
4:10- 4:30	**HEMOCHROMATOSIS: AN UPDATE** Herbert L. Bonkovsky, M.D.
4:30- 4:45	**MRI AND ESOPHAGEAL VARICES: ADIOS ANGIOGRAPHY?** Michael E. Bernardino, M.D.
4:45- 5:00	**ALTERNATIVES IN THERAPY OF ESOPHAGEAL VARICES: PERSONAL OBSERVATIONS** Michael J. Henderson, M.D.
5:00- 5:15	**BLOOD FLOW AND HEPATIC ENCEPHALOPATHY: CLUES TO NEW THERAPY FOR A DROWSY SYNDROME** John T. Galambos, M.D.
5:15	**ADJOURNMENT**

INTERNAL MEDICINE RISK MANAGEMENT PHASE II SEMINAR FRIDAY

GEORGIA SOCIETY OF INTERNAL MEDICINE

PROGRAM CHAIRMAN:
Wyman P. Sloan, III, M.D., Atlanta

For information on this program, please contact James M. Moffett, Director of Specialty Society Relations, at MAG headquarters.

NEUROLOGY SATURDAY

GEORGIA NEUROLOGICAL SOCIETY

PROGRAM CHAIRMAN:
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Barry G. Arnason, M.D.
Professor and Chairman
Department of Neurology
University of Chicago School of Medicine
Chicago, IL

Daniel S. Feldman, M.D.
Professor of Neurology
Medical College of Georgia School of Medicine
Augusta

Robert F. Kibler, M.D.
Professor and Chairman
Department of Neurology
Emory University School of Medicine
Atlanta

SATURDAY, NOVEMBER 23

9:00- 9:45	**TO BE ANNOUNCED**
9:45-10:30	**NEUROIMMUNOLOGY AND MULTIPLE SCLEROSIS** Barry G. Arnason, M.D.
10:30-11:15	**NEW THERAPIES IN MULTIPLE SCLEROSIS** Robert F. Kibler, M.D.
11:15-12:00	**TRACE MINERALS IN MULTIPLE SCLEROSIS** Daniel S. Feldman, M.D.
12:00- 1:00	**LUNCHEON** Members of the Georgia Neurology Society
1:00- 1:45	**THE EPIDEMIOLOGY OF MULTIPLE SCLEROSIS** Barry G. Arnason, M.D.
1:45	**QUESTIONS AND ANSWERS**
	ADJOURN

NEUROSURGERY FRIDAY — RISK MANAGEMENT PHASE II SEMINAR SATURDAY MORNING & SUNDAY MORNING — SCIENTIFIC SESSIONS

GEORGIA NEUROSURGICAL SOCIETY

PROGRAM CHAIRMAN:
RISK MANAGEMENT SEMINAR
William Lowery, M.D., Albany

For more information on this program, please contact James M. Moffett, Director of Specialty Society Relations, at MAG headquarters.

PROGRAM CHAIRMAN:
SCIENTIFIC ASSEMBLY
Herman F. Flanigin, M.D., Augusta

GUEST FACULTY:

Ross Miller, M.D.
Hilton Heod, SC
Former Chief of Neurosurgery
The Mayo Clinic
Consulting Professor
Medicol College of Georgio School of Medicine

SATURDAY, NOVEMBER 23

MODERATOR: Herman F. Flanigin, M.D.

8:30- 8:40	**INTRODUCTION** Donold S. Bickers, M.D. President, Georgio Neurosurgicol Society
8:40- 9:00	**SURGICAL EVACUATION OF INTRAVENTRICULAR HEMORRHAGE** Domenic P. Esposito, M.D., Voldosto Wode H. Renn, M.D., Voldosto
9:00- 9:20	**CORTICAL MAPPING AND EXCISION OF AN AVM IN THE DOMINANT HEMISPHERE** Dennis E. McDonnell, M.D., Augusto Drew Sullivon, M.D., Augusto Hermon F. Flonigin, M.D., Augusta Joseph Smith, M.D., Augusta Arthur Schlosberg, Ph.D., Augusto
9:20-10:20	**FREE PAPERS**
10:20-10:30	**DISCUSSION**
10:30-11:00	**COFFEE BREAK**
11:00-12:00	**PROBLEMS OF SURGERY IN THE POSTERIOR FOSSA** Ross Miller, M.D.
12:00-12:45	**DISCUSSION**
12:45	**ADJOURN**

SUNDAY, NOVEMBER 24

MODERATOR Donald S. Bickers, M.D.

8:15-8:30	**COFFEE & DOUGHNUTS**
8:30- 9:30	**PRESENTATION OF PROBLEM CASES** Discussion by Ross Miller, M.D.
9:30-10:30	**SOCIOECONOMIC REPORT**
10:30-11:00	**COFFEE BREAK**
11:00-12:00	**BUSINESS MEETING**
12:00	**CLOSING REMARKS & ADJOURNMENT**

OBSTETRICS-GYNECOLOGY FRIDAY AFTERNOON

GEORGIA OBSTETRICAL AND GYNECOLOGY SOCIETY

PROGRAM CHAIRMAN:

Donald M. Sherline, M.D., Augusto

FACULTY:

Lawrence D. Devoe, M.D.
Associote Professor and Director of Moternol-Fetol Medicine
Medical College of Georgio School of Medicine
Augusto

Hugh W. Randall, M.D.
Associate Professor of Gynecology-Obstetrics
Clinicol Director of Moternol-Fetal Section
Emory University School of Medicine
Atlonto

Donald Sherline, M.D.
Professor ond Choirmon
Deportment of Obstetrics-Gynecology
Medicol College of Georgio School of Medicine
Augusto

FRIDAY, NOVEMBER 22 ELECTRONIC FETAL HEART RATE MONITORING

OBJECTIVES:

To provide the proctitioner with the basic understonding of the techniques, physiology, and opplicotion of the current stote of electronic fetol heort monitoring.

To present current clinicol opprooches to onteportum fetol heort monitoring testing, including the nonstress test ond contraction stress test, os well os typicol exomples of clinical situotions encountered and their monogement.

To provide the proctitioner with on understonding of techniques for introportum electronic fetol heort rote monitoring, illustroted by exomples of clinicol coses with interpretotion ond monogement.

1:00- 1:10	**WELCOME** Donold Sherline, M.D. — Moderotor
1:10- 1:55	**UNDERSTANDING THE BASICS OF ELECTRONIC FETAL HEART RATE MONITORING** Donold Sherline, M.D.
1:55- 2:05	**QUESTIONS & ANSWERS**
2:05- 2:50	**ANTEPARTUM ELECTRONIC FETAL HEART RATE MONITORING: APPLICATIONS AND EXAMPLES** Lowrence D. Devoe, M.D.

2:50- 3:00	**QUESTIONS & ANSWERS**
3:00- 3:20	**COFFEE BREAK**
3:20- 4:05	**INTRAPARTUM ELECTRONIC FETAL HEART RATE MONITORING: APPLICATIONS AND EXAMPLES** Hugh W. Randall, M.D.
4:05- 4:15	**QUESTIONS & ANSWERS**
4:15- 4:45	**PANEL DISCUSSION** Drs. Sherline, Devoe and Randall
4:45	**ADJOURN**

This program has been approved for 3 cognates, Formal Learning, by the American College of Obstetricians and Gynecologists.

OPHTHALMOLOGY SATURDAY

GEORGIA SOCIETY OF OPHTHALMOLOGY

PROGRAM CHAIRMAN:
William H. Jarrett, M.D., Atlanta
GUEST SPEAKER:
Hunter R. Stokes, M.D., Florence, SC

SATURDAY, NOVEMBER 23

SESSION I **William H. Jarrett, M.D.**

8:00- 8:30	**REGISTRATION**
8:30- 8:40	**OPENING REMARKS** L. E. Brown, M.D., President Georgia Society of Ophthalmology
8:40- 8:50	**RESULTS IN TRAUMATIC OCULAR PERFORATION** Henry J. Kaplan, M.D.
8:50- 9:00	**SYMPATHETIC OPHTHALMIA IN VITRECTOMIZED EYES** William S. Hagler, M.D.
9:00- 9:10	**PROLIFERATIVE VITREO-RETINOPATHY** Edwin H. Donnelly, M.D.
9:10- 9:20	**SILICON OIL FOR COMPLICATED RETINAL DETACHMENT** Travis A. Meredith, M.D.
9:20- 9:30	**PARS PLANA APPROACH FOR DISLOCATED LENSES AND IOLS** Paul Sternberg, M.D.
9:30- 9:40	**DISCUSSION**
9:40- 9:50	**RETINAL ARTERY MACROANEURYSMS** Bruce H. Becker, M.D.
9:50-10:00	**RETINAL COMPLICATIONS OF SUB-TENON INJECTION** Edward M. Fineberg, M.D.
10:00-10:10	**TREATMENT OF RETINAL HOLES** William H. Jarrett, M.D.
10:10-10:20	**DISCUSSION**
10:30-11:00	**COFFEE BREAK**

SESSION II
MODERATOR: L. E. Brown, M.D.

11:00-11:10	**ACUTE EFFECTS OF ARGON LASER TRABECULOPLASTY ON INTRAOCULAR PRESSURE** John Rieser, M.D.
11:10-11:20	**POST-OPERATIVE SUPRACHOROIDAL HEMORRHAGE FOLLOWING FILTRATION PROCEDURE** Thomas S. Harbin, Jr., M.D.
11:20-11:30	**OPEN ANGLE GLAUCOMA SECONDARY TO APPOSITIONAL ANGLE CLOSURE** David G. Campbell, M.D.
11:30-11:40	**YAG LASER AND GLAUCOMA** M. Angela Vela, M.D.
11:40-11:50	**CLASSIFICATION AND TREATMENT OF BILATERAL SUPERIOR OBLIQUE PALSY** Zane F. Pollard, M.D.
11:50-12:00	**DISCUSSION**
12:00-12:40	**FEDERAL INTRUSION IN OPHTHALMOLOGICAL PRACTICE** Hunter R. Stokes, M.D.
12:40- 2:00	**LUNCHEON**

AFTERNOON SESSION
MODERATOR: William H. Jarrett, M.D.

2:00- 2:10	**CONGENITAL DACRYOCYSTOCELE IN IDENTICAL TWINS** Ted H. Wojno, M.D. H. Dwight Cavanagh, M.D.
2:10- 2:20	**OCULOPLASTIC RAVAGES OF LEPROSY** Richard D. Divine, M.D.
2:20- 2:30	**FULL-THICKNESS EYELID PEDICLE GRAFT FOR EYELASH AND LID MARGIN RECONSTRUCTION** Clinton D. McCord, M.D.
2:30- 2:40	**COMPLICATIONS IN IOL SURGERY** Barrie H. Thrasher, Jr., M.D.
2:40- 2:50	**PREDICTED VALUE OF AQUIOMETER FOR POSTOPERATIVE VISUAL ACUITY IN CATARACT PATIENTS** George B. Hubbard, Jr., M.D.
2:50- 3:00	**DISCUSSION**

3:00- 3:40 **STATUS OF OPTOMETRIC LEGISLATION IN STATE LEGISLATURES**
Hunter R. Stokes, M.D.

3:40- 4:00 **COFFEE BREAK**

CONCLUDING SESSION
MODERATOR: L. E. Brown, M.D.

4:00- 4:10 **PHAKODONESIS IN EXTRACAPSULAR IMPLANTATION**
F. Dickinson McMullin, M.D.

4:10- 4:20 **NUCLEAR MAGNETIC RESONANCE IMAGING IN OPHTHALMOLOGY**
Robert H. Spector, M.D.

4:20- 4:30 **MYCROBACTERIA GORDONAE KERATITIS**
David S. Hull, M.D.

4:30- 4:40 **UPDATE ON EPIKERATOPHAKIA**
Philip E. Newman, M.D.

4:40- 4:50 **HISTOCOMPATIBILITY MATCHING IN HIGH-RISK CORNEAL TRANSPLANTATION**
R. Doyle Stulting, M.D.

4:50- 5:00 **COMPLICATIONS OF RADIAL KERATOTOMY**
Robert H. Marmer, M.D.

5:00- 5:10 **DIRECT FLUORESCENT ANTIBODY TEST IN DIAGNOSING HERPES IN EYES PREVIOUSLY STAINED WITH FLUORESCEIN**
Howard E. Borger, M.D.

5:10- 5:20 **DISCUSSION**

5:20 **ADJOURN**

OTOLARYNGOLOGY — HEAD AND NECK SURGERY FRIDAY MORNING

GEORGIA SOCIETY OF OTOLARYNGOLOGY/HEAD AND NECK SURGERY GREATER ATLANTA SOCIETY OF OTOLARYNGOLOGY-HEAD AND NECK SURGERY

PROGRAM CHAIRMAN:
William E. Silver, M.D., Atlanta
Albert A. Clairmont, M.D., Atlanta

FACULTY:
Mark H. DuPuis, M.D.
Douglasville

Foad Nahai, M.D.
Associate Professor of Plastic Surgery
Emory University School of Medicine
Atlanta

James L. Sanders, M.D.
Dalton

FRIDAY, NOVEMBER 22

THE ROLE OF FINE NEEDLE ASPIRATION BIOPSY FOR DIAGNOSIS OF NECK MASSES
Mark H. DuPuis, M.D.

FREE FLAP RECONSTRUCTION OF HEAD AND NECK ABLATIONS
Foad Nahai, M.D.

DIFFICULT DIAGNOSIS IN PROCEDURES IN OTOLOGY
James L. Sanders, M.D.

ADJOURN

PATHOLOGY SATURDAY AND SUNDAY

GEORGIA ASSOCIATION OF PATHOLOGISTS
ATLANTA SOCIETY OF PATHOLOGISTS

SATURDAY, NOVEMBER 23

PROGRAM CHAIRMAN:
E. Capers Palmer, M.D., President
Georgia Association of Pathologists

FACULTY:
Sandy Duncan, M.D.
Associate Professor of Pathology
Emory University School of Medicine
Atlanta

Alfred J. Grindon, M.D.
Director
American Red Cross Blood Services
Atlanta Region

Kenneth Zell, M.D.
Chairman
Department of Pathology
Emory University School of Medicine
Atlanta

9:00- 9:45 **COAGULATION UPDATE**
Sandy Duncan, M.D.

9:45-10:00 **COFFEE BREAK**

10:00-10:45 **SIGNIFICANCE OF ANTI-HTLV III IN VOLUNTARY BLOOD DONORS**
Alfred T. Grindon, M.D.

10:45-11:00 **COFFEE BREAK**

11:00-11:50 **PATHOLOGY OF HEART TRANSPLANTATION**
Kenneth Zell, M.D.

12:00-12:45 **BUSINESS MEETING — GEORGIA ASSOCIATION OF PATHOLOGISTS**

2:30- 4:30 **LABORATORY SESSION — BREAST LESIONS**

SUNDAY, NOVEMBER 24

PROGRAM CHAIRMAN:
William R. Anderson, M.D., President
Atlanta Society of Pathologists

FACULTY:
Thomas Kardos, M.D.
Professor of Pathology
Medical College of Virginia
Richmond

9:00- 2:00 **ASPIRATION BIOPSY**
Tom Kardos, M.D.

Microscopic slide study sets will be available for the cases which Dr. Kardos is presenting. Limited sets are available for $55, and requests should be mailed to:

William R. Anderson, M.D.
Laboratory
Northeast Georgia Medical Center
743 Spring Street
Gainesville, Georgia 30505

Checks should be made payable to the Atlanta Society of Pathologists.

PLASTIC SURGERY SATURDAY MORNING

GEORGIA SOCIETY OF PLASTIC SURGEONS

PROGRAM CHAIRMAN:
W. Jefferson Pendergrast, M.D., Atlanta

FACULTY:
Luis O. Vasconez, M.D.
Professor and Chief
Division of Plastic Surgery
University of Alabama School of Medicine
Birmingham

SATURDAY, NOVEMBER 23

9:30-10:30 **FLAPS: A NEW VIEW**
Luis O. Vasconez, M.D.

10:30-11:00 **COFFEE BREAK**

11:00-12:30 **AESTHETIC SURGERY OF THE FACE: FUTURE APPROACHES**
Luis O. Vasconez, M.D.

12:30- 1:30 **BUSINESS MEETING AND LUNCHEON**
Members of the Georgia Society of Plastic Surgeons

PSYCHIATRY FRIDAY AFTERNOON

GEORGIA PSYCHIATRIC ASSOCIATION

PROGRAM CHAIRMAN:
Gail F. Anderson, M.D., Atlanta

FACULTY:
Allen Frances, M.D.
Professor of Psychiatry
Director of Outpatient Psychiatry Department
Cornell University Medical College
New York, NY

Robert Michels, M.D.
Professor and Chairman of Psychiatry
Cornell University Medical College
Psychiatrist-in-Chief
The New York Hospital
New York, NY

1:00- 1:45 **PSYCHODYNAMICS, PSYCHIATRIC DIAGNOSIS AND PSYCHOTHERAPY**
Robert Michels, M.D.

1:45- 2:15 **CASE PRESENTATION WITH DISCUSSION BY DR. MICHELS**

3:00- 3:30 **COFFEE BREAK**

3:30- 4:15 **MODELS OF CHANGE IN PSYCHODYNAMIC PSYCHIATRY**
Allen Frances, M.D.

4:15- 5:00 **PANEL DISCUSSION OF QUESTIONS FROM PARTICIPANTS**

SURGERY RISK MANAGEMENT PHASE II SEMINAR SATURDAY

GEORGIA CHAPTER, AMERICAN COLLEGE OF SURGEONS

PROGRAM CHAIRMAN:
Eugene O. Harrison, M.D., Atlanta

For information on this program, please contact James M. Moffett, Director of Specialty Society Relations, at MAG headquarters.

SOLITARY THYROID NODULES

NELSON B. WATTS, M.D.

An overview, with emphasis on fine needle aspiration cytology.

Introduction

NODULAR THYROID DISEASE is common and is often detected coincidentally by the physician. Most of these patients will be seen initially by their primary physician, but almost any medical specialist may be the first to detect a thyroid nodule. Therefore, it is important for all physicians to know what conditions may present as a thyroid nodule and to appreciate the natural history of these disorders. In the workup of these patients, the physician must be aware of the usefulness and limitations of the methods available for evaluation.

Estimates of the prevalence of thyroid nodularity vary, ranging up to 25% in some high-risk populations. It is probable that 1 or 2% of the American population has a detectable solitary or dominant thyroid nodule (a solitary nodule is a single lump in an otherwise normal thyroid gland; a dominant nodule is a prominent area of fullness in a multinodular thyroid gland). While most thyroid nodules represent benign conditions, the possibility that a nodule could represent a thyroid malignancy should not be overlooked. The incidence of clinically significant thyroid cancer is approximately 4 in 100,000 — far less than for benign thyroid disease. In an unselected patient population, the probability that a solitary thyroid nodule represents well-differentiated thyroid carcinoma is about one in ten. The usual disorders that present as thyroid nodules and their approximate frequencies are shown in Table 1.

In an unselected patient population, the probability that a solitary thyroid nodule represents well-differentiated thyroid carcinoma is about one in ten.

There is not likely to be any diagnostic difficulty when a patient presents with a stony hard nodule that is fixed to surrounding tissues and associated with lymphadenopathy and vocal cord paralysis. On the other hand, so-called "occult" carcinomas (lesions found microscopically in as many as 6% of autopsies) are impossible to detect clinically and rarely behave as clinical malignancies. The diagnostic challenge occurs in the patient who presents with a solitary lump in the thyroid with no immediate clues as to its cause.

Goals in the management of the patient with a solitary or dominant thyroid nodule include a) early diagnosis and treatment of thyroid malignancies, b) minimizing the use of surgery for the diagnosis of benign disease, and c) cost-effective use of diagnostic and treatment modalities. To attain these goals, the clinician must select an approach to diagnosis that will increase confidence regarding the nature of the specific nodule in question.

Tests to consider in evaluating a patient with a solitary thyroid nodule are shown in Table 2. It is useful to divide these tests into indirect (thyroid scans, ultrasound, blood tests) and direct (needle aspiration or biopsy). Indirect tests allow judgment on statistical probabilities (e.g., 10% of "cold" nodules are malignant, 98% of thyroid cysts are benign, thyroid cancer is unlikely in a patient with hyperthyroidism, etc.), but cannot be relied on to conclusively diagnose thyroid carcinoma or rule it out. While there are occasional false-negative and false-positive results with direct tests, the results provide specific and useful information in most cases.

Dr. Watts is Assistant Professor of Medicine (Endocrinology), Division of Endocrinology and Metabolism, Department of Medicine, Emory University School of Medicine, Atlanta. Send reprint requests to him at the Emory Clinic, 1365 Clifton Rd., Atlanta, GA 30322.

For years, it has been customary to rely on indirect tests, usually beginning the workup with a thyroid scan, often with an ultrasound as well. This approach is more expensive than beginning with a direct test (fine needle aspiration cytology) and using the indirect tests selectively to provide supplemental information, which has been shown to be more efficient and cost-effective. The latter strategy has been gaining in acceptance across the country as fine needle aspiration cytology has become more widely available.

The purpose of this article is to provide an overview of the tests available to evaluate patients with nodular thyroid disease, with special emphasis on the usefulness of fine needle aspiration cytology. For a detailed analysis of these techniques, the reader is referred to comprehensive review articles by Ashcraft and Van Herle.[1-2] The approach to diagnosis and management used at Emory University Hospital and The Emory Clinic will be presented.

Table 1: Findings In Solitary Thyroid Nodules*

90% Benign	
Colloid nodule, multinodular goiter	50%
Follicular adenoma	20%
Thyroiditis	5%
Simple thyroid cyst	5%
Other	10%
10% Clinically malignant	
Papillary or mixed carcinoma	5%
Follicular carcinoma	3%
Medullary carcinoma	2%

*does not include obvious or occult carcinomas

Diagnostic Tools

History and physical examination can provide significant clues regarding the risk of malignancy in a nodule, but cannot be relied on to rule out malignant disease. Benign nodules are more common in women between the ages of 25 and 55, while the incidence of malignant thyroid nodules remains relatively constant with age. Thus, a patient with a thyroid nodule who is younger than age 25 or older than age 55 is more likely to have a malignancy, because benign nodules are less common at these ages. A solitary thyroid nodule in a male is more likely to be malignant than one in a female; this is because benign nodules are four times more common in females than males, while thyroid malignancies have a 2:1 predisposition for females. A history of external irradiation exposure to the head or neck area during infancy (for thymic enlargement), childhood (for tonsillitis), or adolescence (for acne) indicates an increased risk of thyroid neoplasia. It is estimated that thyroid nodules will develop in 30% of such patients, and 30% of these nodules will be malignant (the incidence of hyperparathyroidism is also increased after irradiation). A family history of medullary carcinoma of the thyroid or multiple endocrine neoplasia syndrome is quite suspicious, but these conditions are rare. Symptoms and signs of thyroid hormone excess or deficiency should be looked for, and if present, would suggest a benign condition.

As previously mentioned, *physical findings* may provide a strong clue that a nodule is malignant. However, some thyroid cysts are extremely hard because of the high internal pressure from fluid.

Blood tests of thyroid function (T_4, T_3, TSH) are usually normal in patients with thyroid nodules; an elevated T_4 and T_3 would suggest a toxic nodule, a condition that is usually benign. An elevated TSH would be consistent with a dominant nodule in a multinodular goiter or Hashimoto's thyroiditis. Hashimoto's thyroiditis may occasionally present with asymmetric enlargement of the thyroid, giving the appearance of nodularity. Antithyroglobulin or antimicrosomal antibodies are usually elevated with Hashimoto's thyroiditis. However, Hashimoto's disease is common and may be present in patients who also have other coincidental thyroid neoplasia. Serum thyroglobulin is usually elevated in patients with well-differentiated thyroid carcinoma. Measurements of thyroglobulin can be quite useful in following a patient who is known to have a thyroid malignancy. However, thyroglobulin is also elevated in a variety of benign thyroid conditions and cannot be relied on in the differential diagnosis of a specific nodule. Serum calcitonin is almost always elevated in patients with medullary carcinoma of the thyroid, and is quite useful in evaluating patients with a family history of multiple endocrine neoplasia syndrome. Since medullary carcinoma of the thyroid is quite rare, calcitonin measurements are not routinely useful in the evaluation of patients with solitary thyroid nodules.

Table 2: Solitary Thyroid Nodules: Methods of Evaluation

History
Physical examination
Blood tests (T_4, T_3, TSH, thyroglobulin, calcitonin)
Nuclear scans
Ultrasound
CT scans, magnetic resonance imaging (MRI)
Suppressive therapy with thyroid hormone
Needle aspiration/biopsy
Surgical excision

Nuclear scans of the thyroid have long served as the next step after history, physical examination, and routine blood tests. If the nodule is "hot" (that is, greater uptake of isotope in the nodule than in the surrounding tissue), there is a low probability of malignancy. However, over 90% of solitary thyroid nodules are "cold," and variations in "coolness" are not helpful in diagnosis. Thyroid scans are relatively expensive, usually over $200. Thus, it is costly to do a scan in every patient to

detect the occasional "hot" nodule. The choice of isotope for scanning can be important. Some nodules are "hot" on technetium scan but "cold" on iodine scan — it is the demonstration of function on iodine scan that is significant. I-123 is the isotope of choice for studying thyroid nodules, but availability of this isotope is still limited. In many centers, Tc-99 is routinely used. Finally, not all palpable abnormalities can be seen on scan; in one series, 24% of patients with palpable thyroid carcinomas had a normal scan. Thyroid scans can be useful on a selective basis, but are not required on every patient.

Serum thyroglobulin is usually elevated in patients with well-differentiated thyroid carcinoma; however it is also elevated in a variety of benign thyroid conditions and cannot be relied on in the differential diagnosis of a specific nodule.

Thyroid ultrasound is a painless, non-invasive test that does not involve exposure to irradiation. Ultrasonography provides an objective measurement of nodule size and is 90-95% accurate in determining whether a nodule is solid, cystic, or mixed. Even though a nodule seems to be solitary by palpation, ultrasound may reveal a multinodular goiter, providing some reassurance that the nodule is benign. In most patients, however, the size of the nodule can be determined by physical examination, and the nature of the nodule (solid vs. cystic vs. mixed) can be determined by needle aspiration. Thyroid ultrasound usually costs over $200. For these reasons, routine ultrasound of thyroid nodules is not recommended.

CT scans and magnetic resonance imaging (MRI) do not appear to offer any definite advantages over other available techniques and are likely to be more expensive. It is premature to decide on the role of these studies in the evaluation of thyroid nodules.

Suppressive therapy with thyroid hormone has been used for years to help select patients for surgery. This is based on the assumption that benign nodules get smaller on suppressive therapy (and sometimes disappear), while malignant lesions will not change or will actually increase in size. However, occasional cancers will shrink, and about 30% of benign nodules will not change in size; only about 10% of thyroid nodules will disappear on suppression. Suppressive therapy is of limited use in the initial diagnostic evaluation. It remains helpful in following patients with benign cytologic findings or to reduce the risk of recurrent nodularity after surgery for benign nodular disease. Suppressive therapy is a critical part of the management of patients after surgery for well-differentiated thyroid carcinoma.

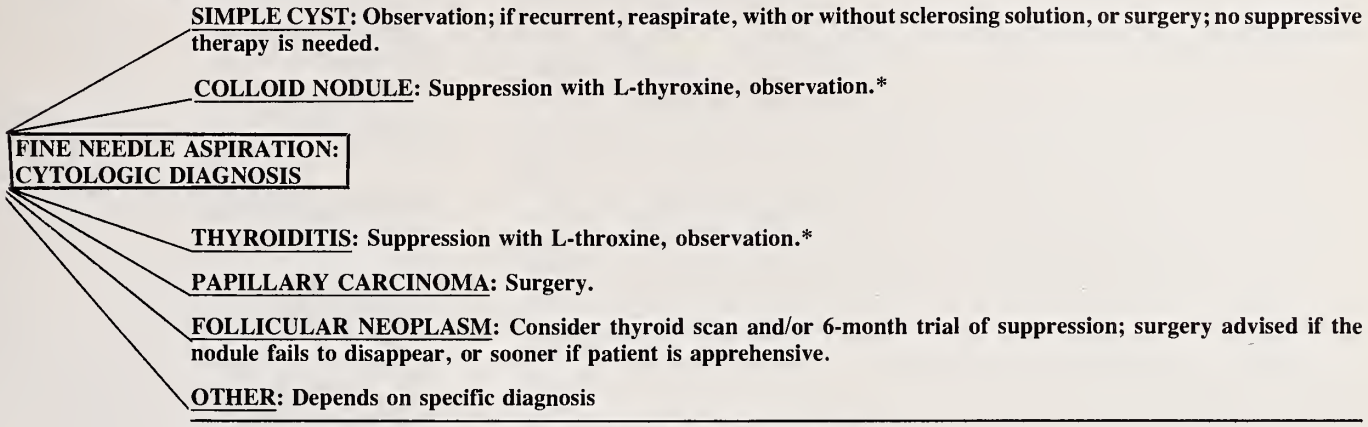
Tissue diagnosis gives the highest degree of confidence for planning management of the patient with a thyroid nodule, usually providing direct information about the underlying disorder. *Fine needle aspiration cytology* is most helpful in this regard. Compared to *cutting needle biopsy*, fine needle aspiration is less expensive, less painful, and involves less risk to the patient. There have been no reports of tumor implants in the needle track after fine needle aspiration. Fine needle aspiration can be used with nodules that are too small for cutting needle biopsy. Most investigators feel that the cytologic material from fine needle aspiration is as good as or better than the material obtained by cutting needle biopsy. Needle puncture will determine whether a lesion is cystic or solid and is often curative in the case of a simple thyroid cyst.

Fine needle aspiration cytology was introduced in Scandinavia in the 1950s and has been used there extensively. Since the 1970s, it has been increasingly accepted in this country as a valuable procedure in the investigation of thyroid nodules. Our technique is as follows: aspirates are obtained using a pistol-grip syringe holder (Cameco Syringe Pistol, Precision Dynamics Corporation, Burbank, CA), a 20 ml plastic disposable syringe, and a 20 gauge needle (others use 23 or 25 gauge needles). The dead space of the needle and syringe is filled with 50% alcohol. No anesthesia is used for the procedure. The skin is entered with a single puncture, after which the plunger of the syringe is drawn back to create negative pressure. The nodule is sampled with multiple needle insertions directed in a radial fashion from the initial skin puncture. Two smears are made and fixed in 95% alcohol. The remaining aspirated material is mixed with 50% alcohol and passed through a Millipore filter. The material is stained with a modified Papanicolaou stain and examined by the endocrinologist

Table 3: Cytologic Diagnosis of Thyroid Nodules

Epithelium	*Colloid*	*Diagnosis*
Small clumps, uniform	Plentiful	Colloid nodule/goiter
Sheets of cells, some atypia	Scant	Follicular neoplasm
Papillary structures, striking nuclear changes, Psammoma bodies	Scant	Papillary carcinoma
Inflammatory cells	Variable	Hashimoto's thyroiditis
Other: cyst, Hurthle-cell tumors, medullary carcinoma, metastatic carcinoma, parathyroid adenomas		

Figure 1: Diagnostic Approach to the Patient With a Thyroid Nodule



*If growth is observed, repeat fine needle aspiration or proceed with surgery.

and a cytopathologist. If any fluid is found, it is completely evacuated, and the procedure is immediately repeated if there is a solid remnant. We have used this procedure in over 500 cases since 1977 and have seen no complications.

Where possible, we assign a cytologic diagnosis to each sample. This allows us to be specific when identifying conditions that are clearly benign (e.g., colloid adenoma, Hashimoto's thyroiditis) or definitely malignant (e.g., papillary carcinoma). The cytologic diagnosis of follicular carcinoma is often difficult, since this diagnosis often depends on permanent histologic sections to show tumor invasion of the capsule, blood vessels, or lymphatics. We use the category "follicular neoplasm" to indicate findings that could be either a follicular adenoma or a follicular carcinoma. The findings we look for on cytology and the related cytologic diagnosis are shown in Table 3. We feel this approach to interpretation is less confusing than simply stating "benign" (which may include most follicular neoplasms — some of them malignant), "suspicious," or "malignant."

Most investigators feel that the cytologic material from fine needle aspiration is as good as or better than the material obtained by cutting needle biopsy.

The availability of fine needle aspiration cytology is limited by the availability of a trained person to do the aspiration and a skilled cytopathologist to interpret the samples. False-positive results are seen in approximately 3-5% of cases, and false negatives in 1-2%. A sample from one area of a large nodule may not be representative of the underlying process, though the use of multiple radial needle insertions minimizes this. The sample may be inadequate for technical reasons, but in our hands, this occurs in under 2% of cases.

Surgical excision may be necessary for the diagnosis of a suspicious nodule, as will be outlined in the next section. The final determination should be based on permanent histologic sections; this is particularly true for follicular carcinoma, where the frozen section may appear benign, yet permanent sections show changes of malignancy. Surgery may also be necessary if a benign nodule is large enough to cause cosmetic or mechanical problems.

The Emory Experience

Our approach at Emory University School of Medicine is to first take a history and perform a physical examination, looking for clues of an increased risk of malignancy. Baseline blood tests of thyroid function (T_4, T_3, TSH) are optional but are needed if the patient shows signs or symptoms of thyroid dysfunction, or if the patient is to be placed on suppressive therapy for follow-up. Next, we routinely use fine needle aspiration cytology. Based on the cytologic diagnosis, the course of management can be undertaken as outlined in Figure 1. Patients with benign cytologic diagnosis can be followed indefinitely on suppressive therapy, with reaspiration or surgery if the nodule increases in size. Most patients with well-differentiated thyroid carcinoma are identified right away, and surgery can be done promptly. Patients with indefinite or suspicious findings on cytology (e.g., "follicular neoplasm") may be evaluated further with indirect tests or a trial of suppressive treatment, but should be referred for surgery if any question remains.

The following clinical vignettes illustrate the usefulness of this approach:

Clinical Vignettes

A.K., a 70-year-old man, was placed on suppressive therapy with L-thyroxine for a long-standing multinodular goiter. After 3 months, there was a slight decrease in the over-

all size of the thyroid gland, but a nodule was noted that was firmer than the rest of the gland. Fine needle aspiration of the nodule showed papillary carcinoma of the thyroid. This was confirmed at surgery, where a large tumor was found to be extending deep into the substance of a large multinodular goiter. COMMENT: The results of fine needle aspiration led to surgery with minimum delay.

J.H., a 46-year-old woman with type I diabetes, was found to have a 2 cm. thyroid nodule that was discovered at a routine exam. Thyroid antibodies were positive, but fine needle aspiration suggested that the nodule was a follicular neoplasm. The surgical specimen showed the nodule to be a follicular adenoma; the rest of the thyroid gland was replaced by Hashimoto's thyroiditis. COMMENT: Had fine needle aspiration not been done, the nodule would probably have been presumed to be Hashimoto's thyrioditis.

G.B., a 47-year-old woman, was found by her gynecologist to have a 3 cm. right thyroid nodule. I-123 scan showed the nodule to be hypofunctioning, and ultrasound of the thyroid (done elsewhere) was interpreted as showing a cystic lesion. She was referred to Emory. Fine needle aspiration showed very cellular material with changes of papillary carcinoma, but no cyst fluid. Surgery revealed a locally invasive papillary carcinoma. COMMENT: The risk of malignancy in a pure thyroid cyst is low; if fine needle aspiration had not been done, her surgery may have been significantly delayed.

T.B., a 37-year-old man, noticed a painless lump in his neck that was found to be "cold" by I-123 scan and solid by ultrasound. Fine needle aspiration revealed 3 ml. of clear fluid with benign cytologic characteristics. There was no palpable abnormality after the fluid was aspirated. COMMENT: In this case, as in the previous one, the ultrasound was misleading. This patient might have been sent to surgery for a presumed solid nodule that was in reality a cyst.

L.J., a 70-year-old woman, had a multinodular goiter with a large dominant nodule. Fine needle aspiration of the nodule showed changes consistent with papillary carcinoma. A frozen section at the time of surgery was interpreted as benign, and a subtotal thyroidectomy was done. The final histologic diagnosis was a mixed papillary-Hurthle cell carcinoma, and the patient was taken back to surgery to complete a near-total thyriodectomy. COMMENT: In this case, the frozen section diagnosis was misleading, and the final histology confirmed the cytologic findings.

Summary

Fine needle aspiration cytology provides a cost-effective, direct test to evaluate a thyroid nodule. The procedure is safe and relatively painless. The results of this test can be used to plan the selective use of other diagnostic tests and to arrive at a program of patient management.

Acknowledgements

Thanks are due to cytopathologists D. Carl Biggers, M.D., in Asheville, N.C.; and C. Whitaker Sewell, M.D.; and Ghazi S. Zaatari, M.D., at Emory University Hospital for their skilled help in interpretation of the samples; to William C. McGarity, M.D., at the Emory Clinic and the many other physicians who have referred their patients to me, and to Lawrence S. Phillips, M.D., for helpful comments on this manuscript.

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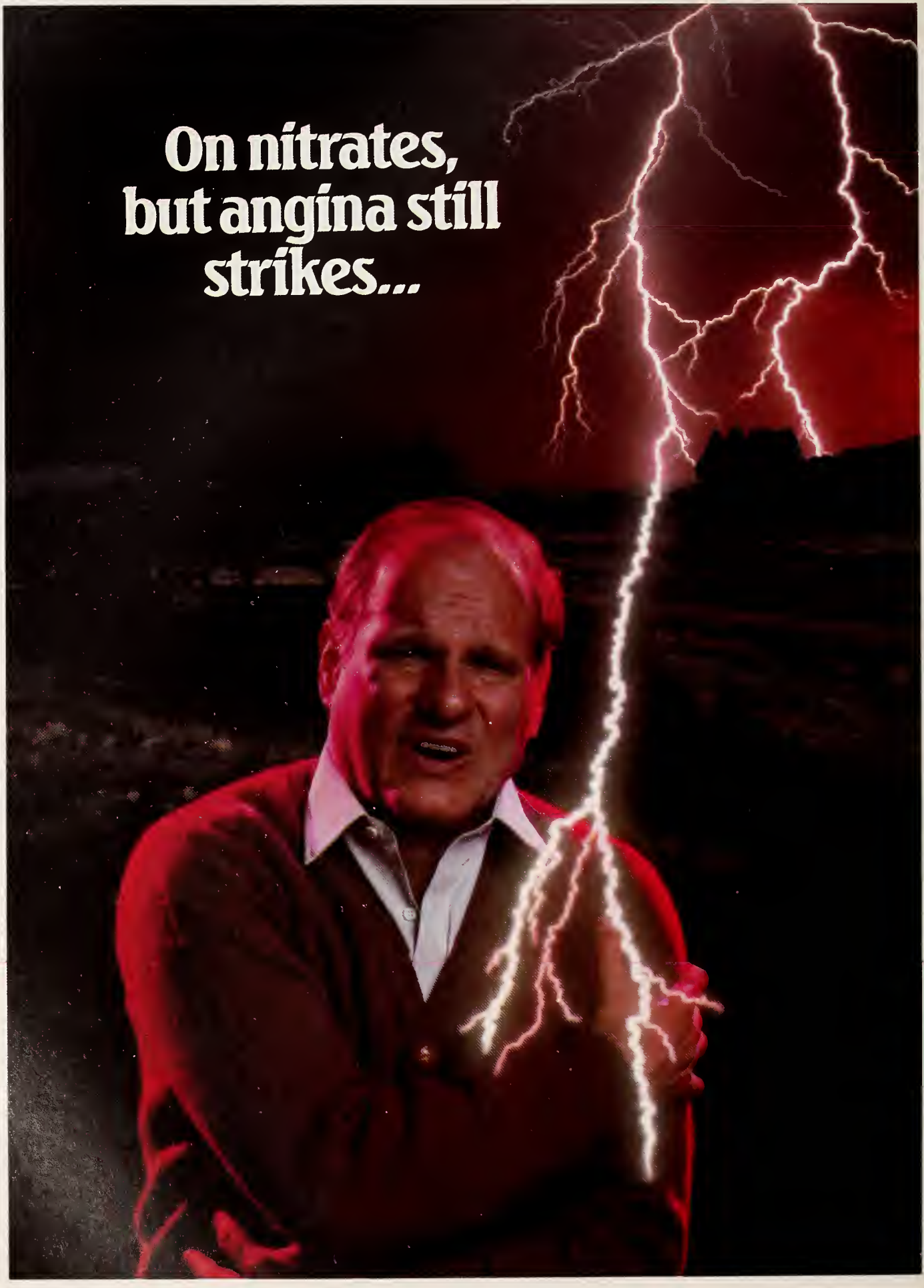


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One study in rats did not suggest a tumorigenic potential, and verapamil was not mutagenic in the Ames test. *Pregnancy Category* C: There are no adequate and well-controlled studies in pregnant women. This drug should be used during pregnancy, labor and delivery only if clearly needed. It is not known whether verapamil is excreted in breast milk; therefore, nursing should be discontinued during ISOPTIN use. **Adverse Reactions:** Hypotension (2.9%), peripheral edema (1.7%), AV block: 3rd degree (0.8%), bradycardia: HR < 50/min (1.1%), CHF or pulmonary edema (0.9%), dizziness (3.6%), headache (1.8%), fatigue (1.1%), constipation (6.3%), nausea (1.6%), elevations of liver enzymes have been reported. 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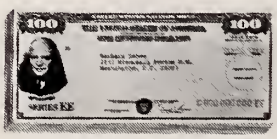


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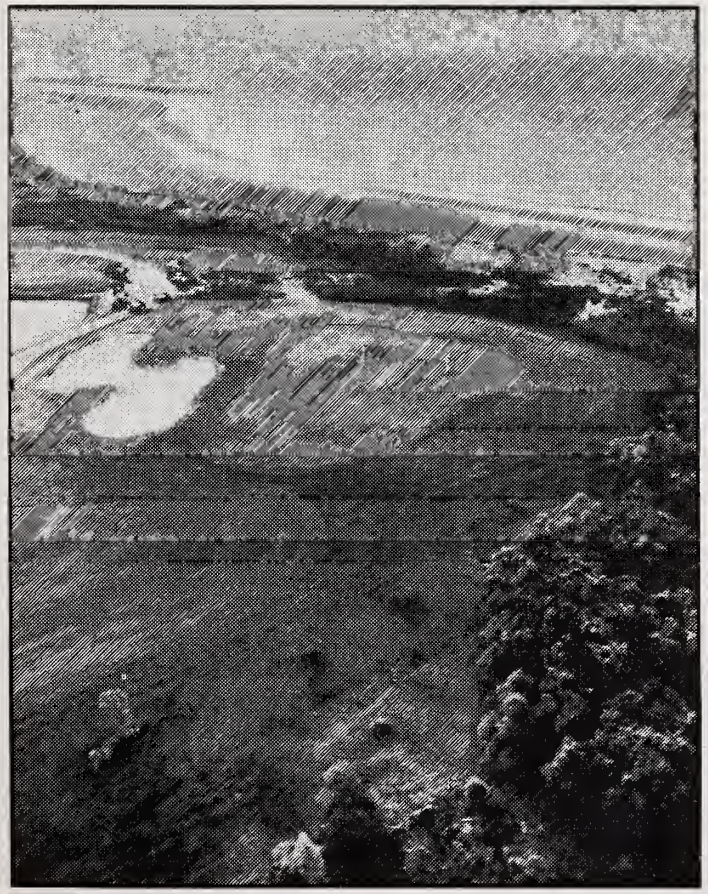
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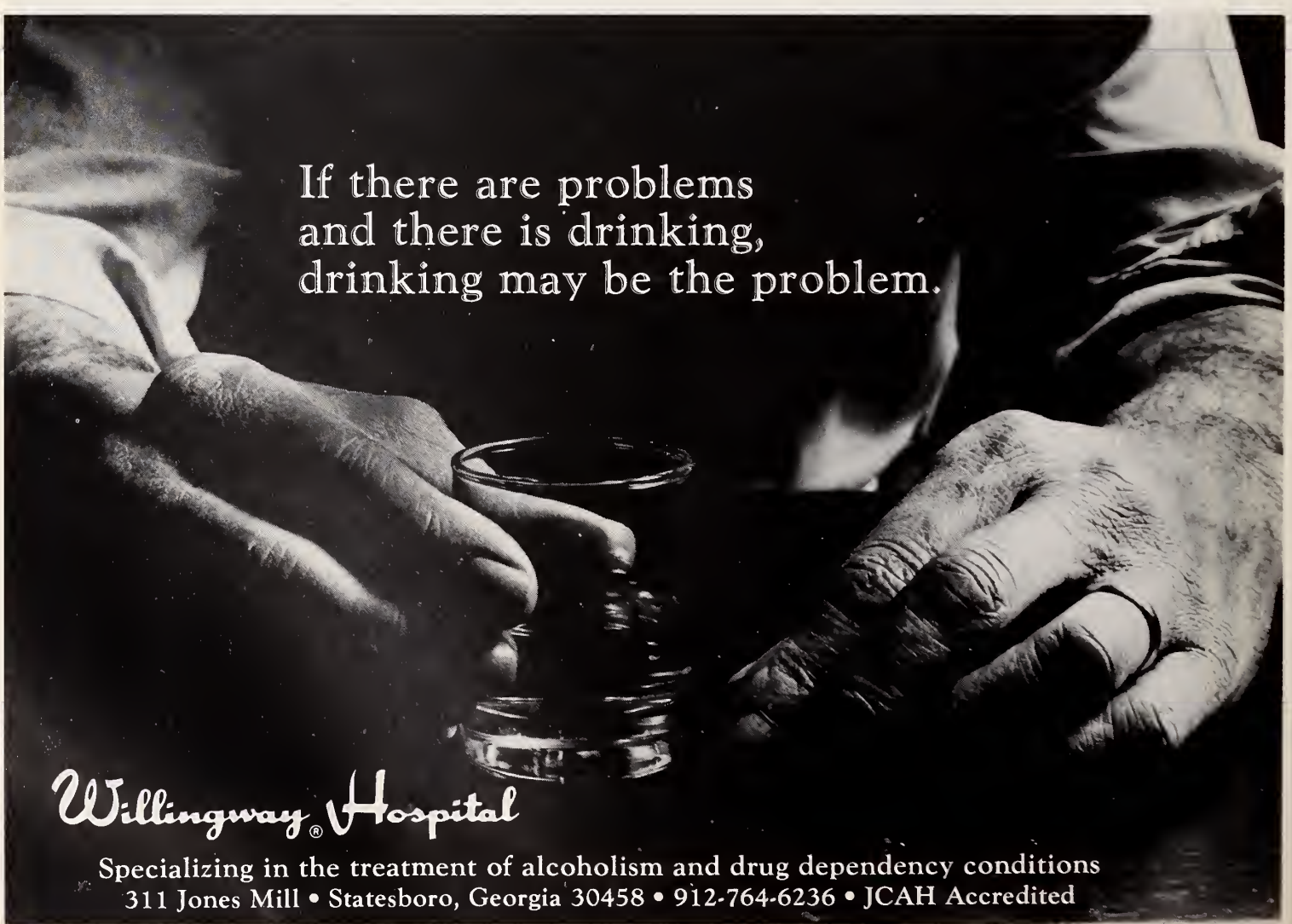
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The Evolution of Reach To Recovery

Robert Cowgill, M.D., F.A.C.S.

Historical Perspective

Prior to 1880, breast cancer was generally considered an almost universally fatal condition by physicians and non-physicians alike. However, by 1950, Halsted's radical mastectomy was generally accepted as a potentially curative treatment for breast cancer, but survival statistics continued to be adversely affected by delays in making the diagnosis. Awareness of tumor biology had led to public education efforts regarding early detection, but vestiges of the old negativity remained firmly entrenched. In an increasingly bosom-oriented society, women who had no alternative 70 years previously now had the option of a post-mastectomy deformity and potential survival. Many women bravely presented to their physicians with self-detected, small breast masses, and ultimately were cured. Sadly, almost half of the women in those days had systemic metastases at the time of diagnosis, and indecision based on reluctance to undergo a radical mastectomy may have caused the fatal delay in treatment.

Reach To Recovery Is Born

Terese Lasser's New York physician detected her breast mass on a routine exam in 1952. She had a biopsy and subsequent radical mastectomy and vividly describes her dilemma in her book *Reach To Recovery*.

> *"Overwhelmed by anxieties so acute and so bewildering that I all but drowned in them, my mind surged with questions — some very practical but with no practical answers forthcoming, some rather foolish but nevertheless terribly serious to me, and some so highly personal I could not even bring myself to put them into words. How I ached to talk to another woman who had had the same experience and come through it, and so could counsel, and reassure and understand! But no such woman was available."*

Mrs. Lasser and the thousands of volunteers who followed her have discovered through personal experience that a mastectomy patient who had adjusted could provide valuable psychological assistance to other women.

She was so impressed with the need for a positive program of post operative mental and physical therapy to make a woman's comeback to her former way of life a challenging goal rather than a distressful ordeal of trial and error, that she undertook building such a program. A totally volunteer network of post-mastectomy women was recruited and trained to make hospital and followup visits to encourage recent mastectomy patients to "Reach" (as in exercising) "to confidence in themselves, to strength and vitality, and to renewed physical and emotional health." Mrs. Lasser and the thousands of volunteers who followed her have discovered through

Dr. Cowgill practices surgical oncology. Send reprint requests to him at 5669 Peachtree Dunwoody Rd., Atlanta, GA 30342.

Prepared at the request of the Georgia Division, American Cancer Society. Others wishing to contribute papers to this Page are invited to send them to T. Gray Fountain, M.D., 910 N. Jefferson, Albany, GA 31708.

personal experience that a mastectomy patient who had adjusted could provide valuable psychological assistance to other women.

In 1969, the Reach to Recovery program merged with the American Cancer Society, and by 1971, the number of physician requests for the service had nearly doubled. Clearly, the carefully selected and trained mastectomy volunteer had become an accepted member of the rehabilitation team.

New Specialized Visits Available

Changes in the management of breast carcinoma, especially reconstruction, have created new needs for help, information, and support for patients. Reach to Recovery has responded and now recruits, selects, and trains volunteer visitors for the following types of specialized patient visits:

1. *Preoperative*
   After the physician has discussed the various treatment alternatives with the patient, she may be visited by a volunteer who could offer support, encouragement, and a role model for recovery.
2. *Post-mastectomy*
   The shortening of hospital stays and the ready availability of physical therapy departments has not diminished the basic need to talk with another woman who has shared the same experience.
3. *Bilateral mastectomy*
   Matching of patients and volunteers results in better communication.
4. *Prophylactic mastectomy*
   High-risk patients matched with volunteers who have had mastectomy as a preventive measure.
5. *Breast preservation surgery*
   Patients undergoing partial mastectomy and post-operative radiation therapy have the opportunity to relate to a volunteer who has had this treatment.
6. *Adjuvant chemotherapy*
   Patients with no proven metastases but who are high risk are offered chemotherapy to increase their chances for cure. Volunteers share their experiences with chemotherapy.
7. *Reconstruction*
   A post-operative volunteer can visit a mastectomy patient who is considering reconstruction.
8. *Man-to-man*
   The male partner of a woman with breast cancer visits another man to share his insights.

As with all Reach to Recovery programs, physician referrals are required. All programs are supervised by a trained Reach To Recovery volunteer who has received approval by her personal physician before acceptance into the training programs. Volunteers have mandatory recertification every 2 years. Only the attending physician can initiate a Reach to Recovery contact.

New Program Available in Georgia — Bosom Buddies

The 1980 Volunteer Training Manual states, "one followup contact is usually adequate. We do not want to encourage dependency or nurture an ongoing friendship. We are not a club or crutch." Many of the volunteers in our state have felt a need for an ongoing program of psychological support, and out of this need a new program has been developed. Volunteers are leading periodic group discussions in their homes encouraging women to begin a new and more positive life.

Changes in the management of breast carcinoma, especially reconstruction, have created new needs for help, information, and support for patients.

The ultimate goal of preventing breast cancer is as yet unattainable, but we have entered the era of early detection. Screening mammography with modern equipment is a very sensitive tool, and women are complying with recommendations to be screened. Much light has been shed on a formerly dark, negative, and frightening subject, and the Reach to Recovery sisterhood deserves a great deal of the credit for this. Referrals to the program may be made by calling one of the regional coordinators on the following list.

Reach to Recovery Regional Coordinators 1984-85

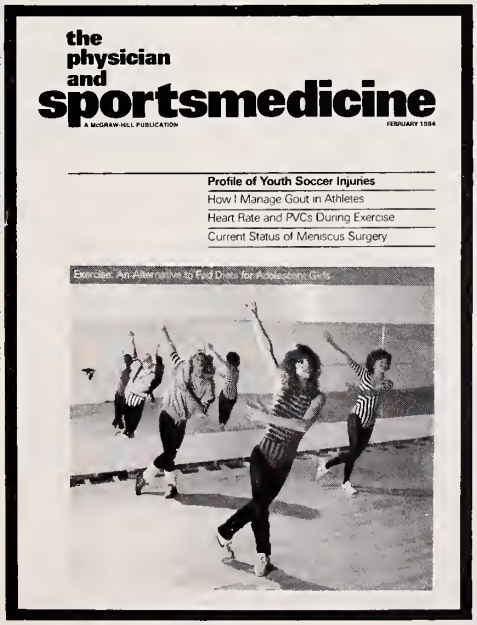
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Cancer Page

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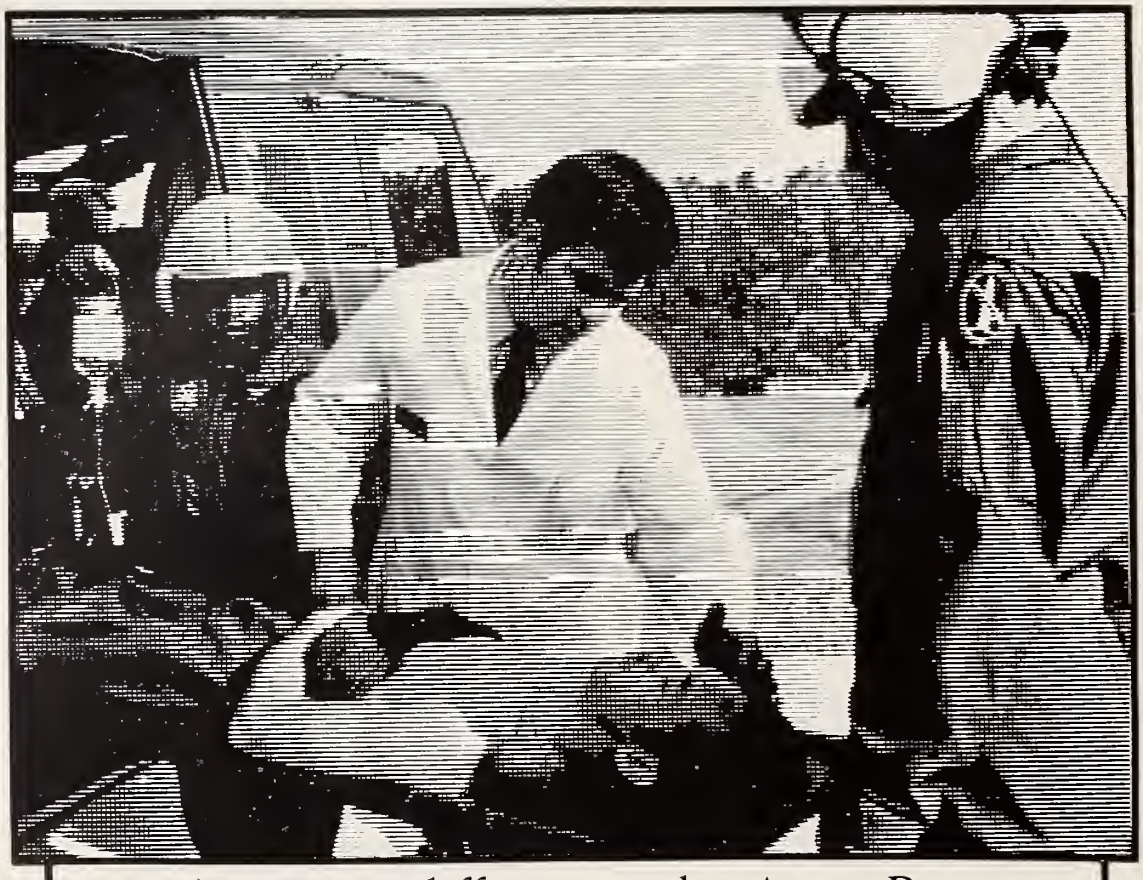
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An Important Development in Physician Delegation of "Licensed Duties"

David B. Poythress

The consequences of inappropriate delegation can be quite serious.

On August 5, 1985,the Georgia Attorney General opined that current Georgia law "does not authorize a physician to delegate tasks to unlicensed personnel, when the performance of such tasks would otherwise require a license in an established category of health care."

The following comments are directed toward the scope and the potential impact of the opinion.

Scope

The opinion requires, in effect, that a physician continually assure that his auxiliary personnel — whether or not they hold a license in some sub-category of health care — do not operate within the exclusive scope of another sub-category for which they are not licensed. This is an extremely complicated task, considering there are at least 10 licensed sub-categories of health care that might be involved,* and the various licensing statutes have overlapping, conflicting, and otherwise ambiguous provisions.

Thus, while the language of the opinion is fairly straightforward, its application to any particular set of facts is highly problematical. Nevertheless, some guidance can be delineated for the more common categories of auxiliary personnel.

Physician's Assistants: It seems clear that a physician's assistant may perform any duties set out in his individual job describtion, as approved by the Composite State Board of Medical Examiners (the "Medical Board") even though such duties fall within the scope of another licensing statute. In a 1982 opinion dealing with the delegation of tasks within the ambit of the speech therapy law, the Attorney General noted that "the physician's assistant is operating as an extension of the physician and the performance of a diagnostic hearing test by such an individual would not be precluded by this opinion."[1] The present, 1985 opinion is keyed to the concept of delegation only to "qualified" personnel, and the Attorney General notes that, "The General Assembly has determined that 'qualified' individuals include physician's assistants as well as licensed individuals in other established categories of health care."

Nurses: It likewise seems clear that nurses would *not* be considered "qualified" in the same broad sense as physician's assistants. Although the "practice of nursing" is rather broadly defined in the law and involves "substantial specialized judgment and skill,"[2] the Attorney General opined in 1967 (under prior law) that, as a matter of custom and practice,

*Physician assistants, nurses, speech therapists and audiologists, physical therapists, athletic trainers, dieticians, occupational therapists, and conceivably optometrists, psychologists,and chiropractors

Mr. Poythress is MAG's General Counsel. Send reprint requests to him at 938 Peachtree St., Atlanta, GA 30309.

"nursing services have not included making diagnoses or performing tasks involving a degree of medical discretion."[3]

While a nurse apparently does not have the latitude to perform activities within the ambit of other licensing statutes, a physician does have broad latitude in delegating auxiliary services, which might otherwise be performed by a nurse, to unlicensed personnel. The nursing law does not prohibit "the performance of auxiliary services [by a non-nurse] in the care of patients when such . . . activities *do not require the knowledge and skill required of a . . . [nurse]* and when such . . . activities are performed under orders of a licensed physician . . . ."[4]

The opinion requires that a physician continually assure that his auxiliary personnel do not operate within the exclusive scope of another sub-category for which they are not licensed.

The italicized language constitutes a very minimal restraint on a physician's descretion in delegating tasks to unlicensed personnel, insofar as the "practice of nursing" is defined in fairly non-specific language as:

> "any act in the observation, care, and counsel of the ill, injured, or infirm, or in the maintenance of health or prevention of illness of others; or in the admistration of medications and medical treatments as prescribed by a physician . . . which [act] requires substantial specialized judgment and skill based on knowledge and application of the principles of physical and psychosocial science. . . ."[5]

X-ray technicians and lab technicians: X-ray technicians are not licensed or certified in any fashion, so these duties may be performed by unlicensed auxiliary personnel. Lab technicians are "certified" by the Department of Human resources, but laboratories "operated by duly licensed physicians exclusively in connection with the diagnosis and treatment of their own patients"[6] are exempt from the regulations, so these duties may be performed in such cases by unlicensed auxiliary personnel.

Impact

The impact of the opinion depends on the forum in which the question of delegation is raised.

The most serious, practical application may be in civil malpractice claims. Georgia law recognizes the principle of "negligent delegation" under which a physician could be civilly responsible if he delegates duties to an unqualified auxiliary personnel which results in injury to a patient.[7] The opinion raises the serious possibility that the principle of "negligence *per se*" could be applied to a physician if he inappropirately delegates "licensed duties" to an unlicensed auxiliary, no matter how well qualified the auxiliary may be.

The principle of negligence *per se* holds that the breach of a statutory standard of conduct is sufficient, standing alone, to establish negligence if the person injured falls within the class of people intended to be protected and the injury was of the kind intended to be guarded against by the statute.[8]

The most serious, practical application of the opinion may be in civil malpractice claims.

In the 1984 case of *Central Anesthesia Associates, P.C. v. Worthy*,[9] the Georgia Court of Appeals held that the P.C., among others, was negligent *per se* in failing to provide the statutorily required supervision over the nurse who administered anesthesia to a patient who suffered brain damage. The *Worthy* case was recently affirmed by

the Georgia Supreme Court, and there appears to be no intellectual obstacle to an extension of the "negligence *per se*" line of reasoning to a case of inappropriate delegation.

A less likely forum in which the delegation issue might be raised is a civil action to enjoin the unauthorized practice of the subcategory of health care by an unlicensed auxiliary. The practical likelihood of a confrontation between the Medical Board and another licensing board is fairly remote, but the possibility of a private suit against an individual doctor and his auxiliary cannot be ruled out.

The least likely, but most severe, forum would be a criminal prosecution against a doctor and his auxiliary for engaging in the unlicensed practiced of the sub-category of health care.

And finally, it is at least theoretically possible that a physician could bring his own action seeking a declaratory judgment as to the legality of his intended delegation of duties.

Obviously, none of these forums is very attractive to an individual doctor, nor is any of them likely to provide the kind of broad issue clarification that is needed on this subject. Likewise, there is no administrative apparatus, among the licensing boards or elsewhere, for resolving a continuing jurisdictional issue of this magnitude and complexity. The clear impact of the opinion on the cost and availability of medical care is a policy issue which only the legislative branch of government can address.

Conclusion

Until a broad clarification of the issue of physician delegation is forthcoming, a physician must exercise extreme caution in allowing auxiliary personnel to perform acts that may fall within the scope of a licensing law unless the auxiliary holds the appropriate license. The consequences of inappropriate delegation can be quite serious. Adverse action by other professionals cannot be discounted, but the most damaging consequence could be extension of the "negligence *per se*" doctrine to a malpractice claim based on inappropriate delegation.

Notes

1. Ops. Atty. Gen. 82-90.
2. O.C.G.A. 43-26-1(3).
3. Ops. Atty. Gen. 67-463.
4. O.C.G.A. 43-26-11 (emphasis added).
5. O.C.G.A. 43-26-1(3).
6. DHR Regulations 290-5-29-.02.
7. *Cf., Mitchell Co. Hosp. Auth. v. Joiner,* 229 Ga. 140, 189 S.E.2d 412 (1972); *Sheffield v. Zilis,* 170 Ga.App. 62, 316 S.E.2d 493 (1984).
8. See, *Journal MAG,* March 1985, pp. 176-179.
9. *Central Anesthesia Assoc. P.C. v. Worthy,* 173 Ga.App. 150, 325 S.E.2d 819 (1984). ■

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Zafiruddin, Mohammad, Richmond — ACT — FP/GER
1713-C Central Ave., Augusta 30904

PERSONALS

Fifth District

Luella Klein, M.D., of Marietta, the first woman to become president of The American College of Obstetricians and Gynecologists (ACOG), has been honored by the state of Georgia for "her lifelong dedication to providing quality health care for women." The proclamation from Gov. Joe Frank Harris was read on May 13 during the ACOG Annual Clinical Meeting held in Washington, D.C. The Governor, along with ACOG, commended Dr. Klein for speaking out on the problems of unintended pregnancy, for her distinguished career as a maternal-fetal medicine specialist, and for her leadership and contributions to obstetrics and gynecology. "Luella Klein . . . has brought much credit and acclaim to herself, to her profession and to the State of Georgia," proclaimed Gov. Harris. Dr. Klein is deputy director of Obstetric Services at Grady Memorial Hospital and professor of obstetrics and gynecology at Emory University School of Medicine.

J. W. Veatch, Jr., M.D., an Atlanta surgeon, will serve as vice president of the national Alumni Association of Emory University representing alumni of the School of Medicine. He also serves on the Executive Committee of the Alumni Council.

Cardiologist **Nanette K. Wenger, M.D.,** as President of the Scientific Council on the Rehabilitation of Cardiac Patients of the International Society and Federation of Cardiology, chaired an international conference addressing "The Education of the Patient with Cardiac Disease in the Twenty-First Century," June 24-26. The conference was held at Heart

House, the learning center of the American College of Cardiology in Bethesda, Maryland. It was co-sponsored by the International Society and Federation of Cardiology; the National Heart, Lung, and Blood Institute; the American College of Cardiology; and the American Heart Association. Dr. Wenger was also a keynote speaker at the Xth Dominican Congress of Cardiology in Santo Domingo in August and was elected an honorary member of the Dominican Society of Cardiology.

Sixth District

Keith Huckaby, M.D., an internist, has opened a practice in Thomaston and joined the staff of the Upson County Hospital.

Seventh District

Stanley M. Fineman, M.D., a pediatric allergist, of Marietta, has received one of the American Lung Association of Georgia's highest honors — the "Professional of the Year Award." He was presented this award at the Association's recent 72nd annual meeting in Atlanta. Dr. Fineman is in private practice and a clinical assistant professor of pediatrics at Emory University School of Medicine.



(Right) Stanley M. Fineman, M.D., a Marietta allergist, is the 1985 recipient of the American Lung Association of Georgia's "Professional of the Year" award. Presenting it to him is last year's winner, Ross Bowers, R.R.T.

Ninth District

Stuart Sanders, M.D., opened his practice of internal medicine in Demorest on July 22.

Habersham County Medical Center has announced that **John E. Cebe, M.D.,** has begun his practice of internal medicine and will serve Habersham and White counties. Dr. Cebe's office is located in Demorest.

Tenth District

Donald M. Sherline, M.D., chairman of the Department of Obstetrics and Gynecology at the MCG, has been appointed to the State of Georgia Council on Maternal and Infant Health by Governor Joe Frank Harris. Dr. Sherline, a cum laude graduate of Utica College of Syracuse University, received his MD degree from Northwestern University and did his post-doctoral study in obstetrical anesthesia at Case Western Reserve University. A member of the MCG staff since 1982, Dr. Sherline is an examiner of the American Board of Obstetrics and Gynecology, a consultant to the *American Journal of Obstetrics and Gynecology*, and president of the Association of Professors of Obstetrics and Gynecology.

DEATHS

Louis H. Cargill, Jr.

Louis H. Cargill, Jr., M.D., 55, a general practitioner from Albany, died August 10. Dr. Cargill had lived in Albany 5 years and was retired from the U.S. Air Force. He was a member of the American Cancer Society, a Fellow of the American College of Preventive Medicine, and a diplomate in Aerospace Medicine American Board of Preventive Medicine.

Survivors include his wife, one daughter, two sons, his father, and two grandchildren.

H. Hilt Hammett, Jr.

H. Hilt Hammett, Jr., M.D., of LaGrange, died August 18, at University Hospital in Birmingham. Dr. Hammett was 67. He specialized in ophthalmology, otology, laryngology, rhinology, and otorhinolaryngology. A 1941 graduate of Emory University

School of Medicine, Dr. Hammett was nationally known for his work in medicine. He was chairman of Blue Cross and Blue Shield of Georgia in Columbus for 20 years; president, first vice president and second vice president of the MAG; chairman of the Composite State Board of Medical Examiners; president of Troup County Medical Society; chief of staff at West Georgia Medical Center; and treasurer of its Board of Trustees.

Survivors include his wife, two daughters, one son, one sister, and four grandchildren.

Roy J. Johnson, Jr.

Roy J. Johnson, Jr., M.D., died July 28, at age 69. Dr. Johnson was a family practitioner and community leader in Fitzgerald. After graduating magna cum laude from both Emory University and Emory University School of Medicine, he served in the U.S. Navy, attached to the U.S. Marine Corps during World War II. He began practicing medicine in Fitzgerald in 1948, and during some 37 years served the community in many ways. He was a medical director for the Fitzgerald battery plant of Delco Remy and for the Life Care Center. He was a director of the C & S Bank of Fitzgerald and a member and past president of the Fitzgerald Rotary Club. He was a former member of the Ben Hill County Board of Hospital Authority, medical director of Dorminy Memorial Hospital, and chief of its medical staff.

He is survived by his wife, one daughter, two stepsons, and three grandchildren.

Carlos R. Triana

General Surgeon, Carlos R. Triana, M.D., 54, of Patterson died June 25 of cerebral infarction. Dr. Triana graduated from the University of Havana in 1954. He was certified by the Board of Family Practice and Board qualified in Surgery.

A WORD TO THE WHYS

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Physician's Recognition Award Recipients

LISTED BELOW *are those physicians in Georgia who have earned the AMA's Physician's Recognition Award (PRA) from April through June, 1985.*

The Award was established in 1969 "to recognize, encourage, and support physicians who participate regularly in continuing medical education and to emphasize the importance of developing more meaningful continuing medical education opportunities for physicians." A minimum of 150 credit hours of CME must be earned over a 3-year period to qualify for the Award. The hours may include such activities as conferences, residencies, teaching, writing, private reading, listening to cassettes, home study courses, consultation, and peer review; at least 60 of the hours, however, must be from formal CME programs sponsored or co-sponsored for Category I credit by organizations accredited for these activities.

The MAG House of Delegates has set a goal that all MAG members shall have received the PRA by 1985. We congratulate the following physicians who have distinguished themselves and their profession by their commitment to continuing education:

William S. Alexander, Atlanta
Richard D. Almeroth, Winder
Ralph Austin, Macon
Jack M. Averett, Columbus
David W. Bacastow, Athens
Kathryn T. Ballard, Calhoun
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John G. Bates, Cuthbert
James H. Beall, Dawsonville
Bruce H. Becker, Atlanta
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Irwin R. Berman, Brunswick
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Thomas W. Carswell, Palmetto
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William D. Crawley, Rossville
Marshall H. Crenshaw, Decatur
Robert S. Crumrine, Augusta
Marcia Lee Delk, Augusta
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Michael B. Gladson, Athens
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Homer L. Gold, Canton
Stephen R. Goldman, Atlanta
Carey W. Goodman, Statesboro
George F. Green, Eatonton
Mack V. Greer, Valdosta
George W. Grimes, Milledgeville
Mitchell Guttenplan, Atlanta
Hamid A. Hadi, Augusta
Vaughan D. Hall, Hinesville
Magdi B. Hanna, Columbus
William P. Harbin, Rome
William N. Harper, Atlanta
Louis J. Herskowitz, Dunwoody
Thomas W. Hester, Augusta
John L. Holcombe, Dallas
Douglas C. Huber, Atlanta
William O. Inman, Brunswick
Thomas W. Jackson, Martinez
Clyatt W. James, Macon
Jack R. Jarvis, Atlanta
David E. Kent, Augusta
Karl R. Kerchief, Augusta
Fred O. Kessler, Savannah
Jonathan S. Krauss, Augusta
Charles C. Lamb, Albany
Craig R. Lewis, Avondale Estates
Michael M. Linder, Columbus
Richard C. Manus, Austell
William Edgar Mayher, Albany
Robert E. McAlister, Norcross
Archibald A. McNeill, Camilla
Jack R. Meacham, Summerville
Ramon V. Meguiar, Jesup
Richard E. Melcher, Augusta
Elfriede M. Mellinger, Augusta
Cecil L. Miller, Buford
Alfonso J. Mooney, Statesboro
Chester W. Morse, Decatur
Zeeba D. Najak, Atlanta
J. Jacobs Nichols, Atlanta
Alan J. Olansky, Atlanta
William W. Orr, Athens
John B. Otis, Atlanta
Richard C. Parsons, Decatur
Peter M. Payne, Athens
Gary L. Petry, Lilburn
Frank M. Pickens, Atlanta
Pablo Piedrahita, Conyers
Harry Porter, Atlanta
Mary M. Powell, Elberton
Willie F. Rainey, Decatur
Michael David Reese, Lithia Springs
Jonathan E. Reiner, Augusta
James P. Reitt, Atlanta
German M. Reyes, Ft. Benning
Ferrol A. Sams, Fayetteville
Floyd S. Sanders, Clarkesville
Gloria L. Sellman, Decatur
Linda C. Selsor, Augusta
Andrew T. Sheils, Savannah
W. Thomas Shoaf, Lawrenceville
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John Richard Stephenson, Columbus
Rosalind A. Stevens, Atlanta
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Sandra P. T. Tho, Augusta
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Richard E. Wood, Columbus
Robert Alan Zorowitz, Franklin

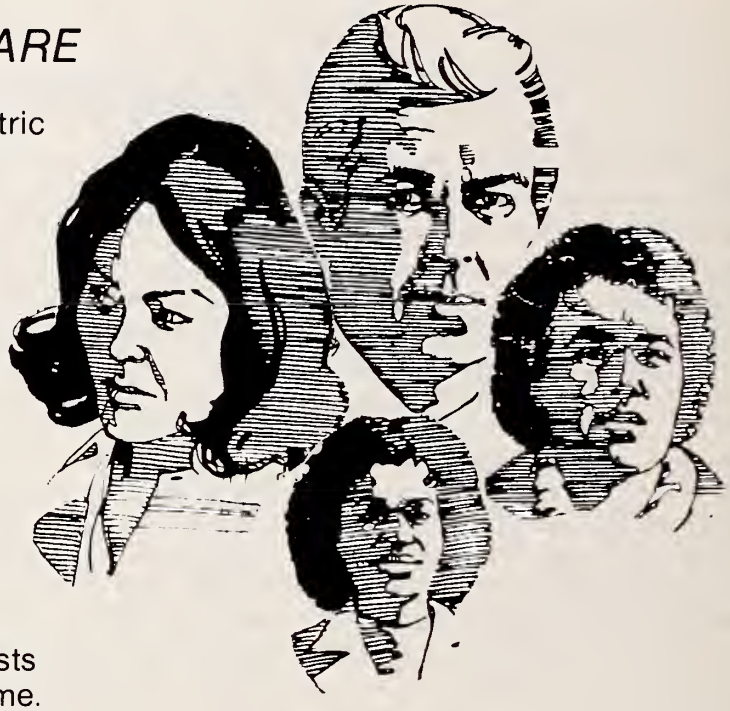
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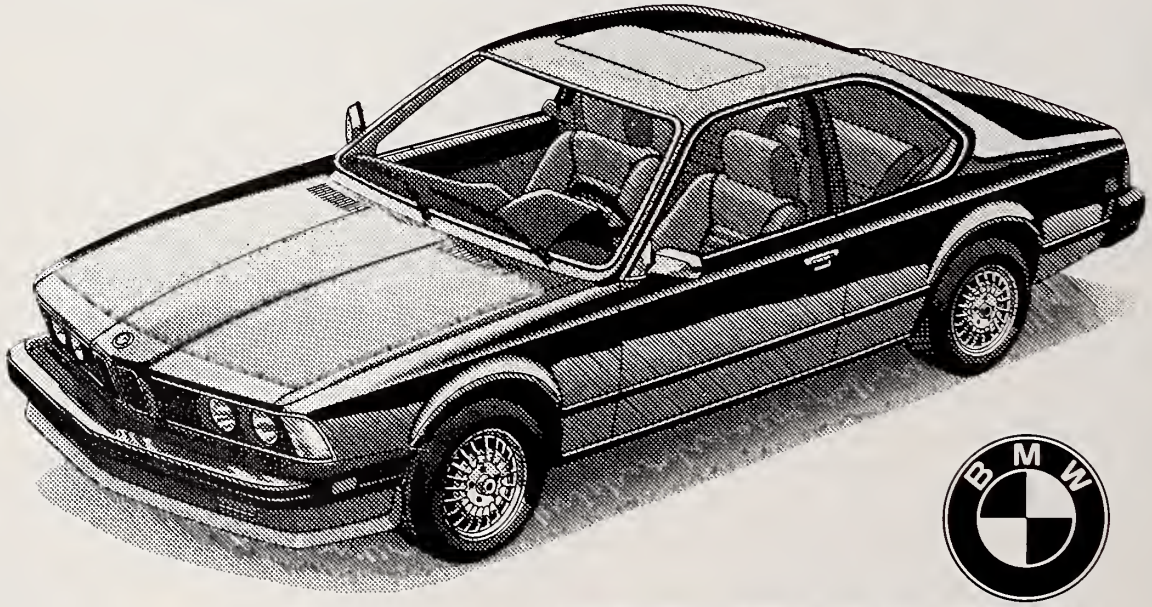
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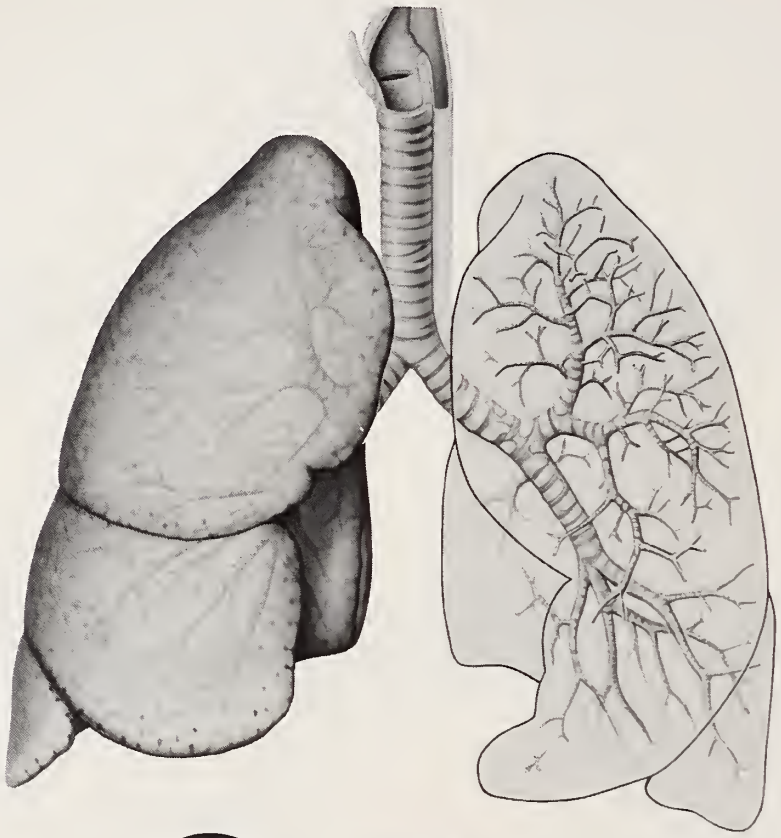
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Appropriate culture and susceptibility studies should be performed to determine susceptibility of the causative organism to Ceclor.

Contraindication: Ceclor is contraindicated in patients with known allergy to the cephalosporin group of antibiotics.

Warnings: IN PENICILLIN-SENSITIVE PATIENTS, CEPHALOSPORIN ANTIBIOTICS SHOULD BE ADMINISTERED CAUTIOUSLY. THERE IS CLINICAL AND LABORATORY EVIDENCE OF PARTIAL CROSS-ALLERGENICITY OF THE PENICILLINS AND THE CEPHALOSPORINS, AND THERE ARE INSTANCES IN WHICH PATIENTS HAVE HAD REACTIONS, INCLUDING ANAPHYLAXIS, TO BOTH DRUG CLASSES.

Antibiotics, including Ceclor, should be administered cautiously to any patient who has demonstrated some form of allergy, particularly to drugs.

Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics (including macrolides, semisynthetic penicillins, and cephalosporins); therefore, it is important to consider its diagnosis in patients who develop diarrhea in association with the use of antibiotics. Such colitis may range in severity from mild to life-threatening.

Treatment with broad-spectrum antibiotics alters the normal flora of the colon and may permit overgrowth of clostridia. Studies indicate that a toxin produced by *Clostridium difficile* is one primary cause of antibiotic-associated colitis.

Mild cases of pseudomembranous colitis usually respond to drug discontinuance alone. In moderate to severe cases, management should include sigmoidoscopy, appropriate bacteriologic studies, and fluid, electrolyte, and protein supplementation. When the colitis does not improve after the drug has been discontinued, or when it is severe, oral vancomycin is the drug of choice for antibiotic-associated pseudomembranous colitis produced by *C. difficile*. Other causes of colitis should be ruled out.

Precautions: *General Precautions* — If an allergic reaction to Ceclor® (cefaclor, Lilly) occurs, the drug should be discontinued, and, if necessary, the patient should be treated with appropriate agents, e.g., pressor amines, antihistamines, or corticosteroids.

Prolonged use of Ceclor may result in the overgrowth of nonsusceptible organisms. Careful observation of the patient is essential. If superinfection occurs during therapy, appropriate measures should be taken.

Positive direct Coombs' tests have been reported during treatment with the cephalosporin antibiotics. In hematologic studies or in transfusion cross-matching procedures when antiglobulin tests are performed on the minor side or in Coombs' testing of newborns whose mothers have received cephalosporin antibiotics before parturition, it should be recognized that a positive Coombs' test may be due to the drug.

Ceclor should be administered with caution in the presence of markedly impaired renal function. Under such conditions, careful clinical observation and laboratory studies should be made because safe dosage may be lower than that usually recommended.

As a result of administration of Ceclor, a false-positive reaction for glucose in the urine may occur. This has been observed with Benedict's and Fehling's solutions and also with Clinitest® tablets but not with Tes-Tape® (Glucose Enzymatic Test Strip, USP, Lilly).

Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.

Usage in Pregnancy — Pregnancy Category B — Reproduction studies have been performed in mice and rats at doses up to 12 times the human dose and in ferrets given three times the maximum human dose and have revealed no evidence of impaired fertility or harm to the fetus due to Ceclor® (cefaclor, Lilly). There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed.

Nursing Mothers — Small amounts of Ceclor have been detected in mother's milk following administration of single 500-mg doses. Average levels were 0.18, 0.20, 0.21, and 0.16 mcg/ml at two, three, four, and five hours respectively. Trace amounts were detected at one hour. The effect on nursing infants is not known. Caution should be exercised when Ceclor is administered to a nursing woman.

Usage in Children — Safety and effectiveness of this product for use in infants less than one month of age have not been established.

Adverse Reactions: Adverse effects considered related to therapy with Ceclor are uncommon and are listed below.

Gastrointestinal symptoms occur in about 2.5 percent of patients and include diarrhea (1 in 70).

Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment. Nausea and vomiting have been reported rarely.

Hypersensitivity reactions have been reported in about 1.5 percent of patients and include morbilliform eruptions (1 in 100). Pruritus, urticaria, and positive Coombs' tests each occur in less than 1 in 200 patients. Cases of serum-sickness-like reactions (erythema multiforme or the above skin manifestations accompanied by arthritis/arthralgia and, frequently, fever) have been reported. These reactions are apparently due to hypersensitivity and have usually occurred during or following a second course of therapy with Ceclor. Such reactions have been reported more frequently in children than in adults. Signs and symptoms usually occur a few days after initiation of therapy and subside within a few days after cessation of therapy. No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome.

Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy.

Other effects considered related to therapy included eosinophilia (1 in 50 patients) and genital pruritus or vaginitis (less than 1 in 100 patients).

Causal Relationship Uncertain — Transitory abnormalities in clinical laboratory test results have been reported. Although they were of uncertain etiology, they are listed below to serve as alerting information for the physician.

Hepatic — Slight elevations in SGOT, SGPT, or alkaline phosphatase values (1 in 40).

Hematopoietic — Transient fluctuations in leukocyte count, predominantly lymphocytosis occurring in infants and young children (1 in 40).

Renal — Slight elevations in BUN or serum creatinine (less than 1 in 500) or abnormal urinalysis (less than 1 in 200).

[061782R]

Note. Ceclor® (cefaclor, Lilly) is contraindicated in patients with known allergy to the cephalosporins and should be given cautiously to penicillin-allergic patients.

Penicillin is the usual drug of choice in the treatment and prevention of streptococcal infections, including the prophylaxis of rheumatic fever. See prescribing information.

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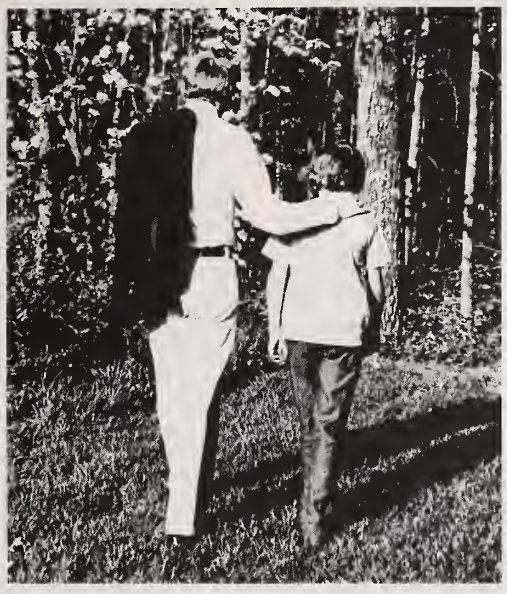
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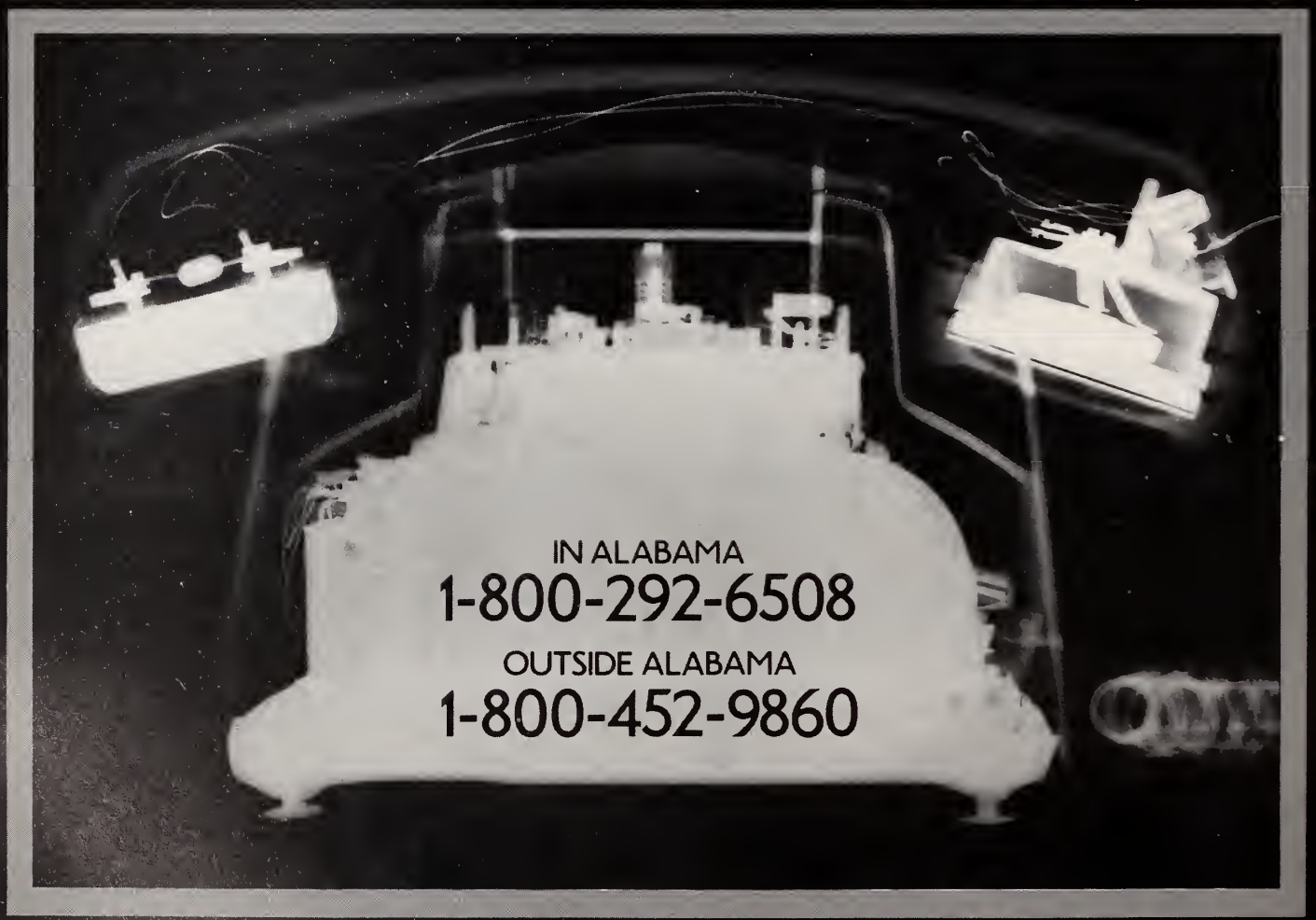
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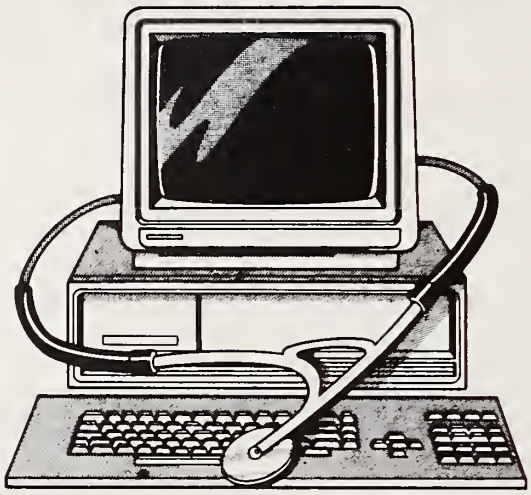
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> Soter NA, Wasserman SI, Austen KF. Cold urticaria release into circulation of histamine and eosinophil chemotactic factor of anaphylaxis during cold challenge. N Engl J Med 1976;294:687-90.

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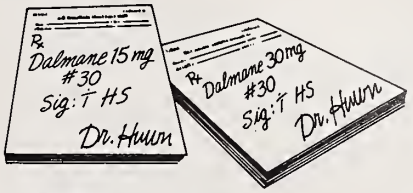
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INDICATIONS AND USAGE: SORBITRATE (isosorbide dinitrate) is indicated for the treatment and prevention of angina pectoris. All dosage forms of isosorbide dinitrate may be used prophylactically to decrease frequency and severity of anginal attacks and can be expected to decrease the need for sublingual nitroglycerin.

The sublingual and chewable forms of the drug are indicated for acute prophylaxis of angina pectoris when taken a few minutes before situations likely to provoke anginal attacks. Because of a slower onset of effect, the oral forms of isosorbide dinitrate are not indicated for acute prophylaxis.

CONTRAINDICATIONS: SORBITRATE is contraindicated in patients who have shown purported hypersensitivity or idiosyncrasy to it or other nitrates or nitrites. Epinephrine and related compounds are ineffective in reversing the severe hypotensive events associated with overdose and are contraindicated in this situation.

WARNINGS: The benefits of SORBITRATE during the early days of an acute myocardial infarction have not been established. If one elects to use organic nitrates in early infarction, hemodynamic monitoring and frequent clinical assessment should be used because of the potential deleterious effects of hypotension.

PRECAUTIONS: General: Severe hypotensive response, particularly with upright posture, may occur with even small doses of SORBITRATE. The drug should therefore be used with caution in subjects who may have blood volume depletion from diuretic therapy or in subjects who have low systolic blood pressure (eg, below 90 mmHg). Paradoxical bradycardia and increased angina pectoris may accompany nitrate-induced hypotension. Nitrate therapy may aggravate the angina caused by hypertrophic cardiomyopathy.

Marked symptomatic, orthostatic hypotension has been reported when calcium channel blockers and organic nitrates were used in combination. Dose adjustment of either class of agents may be necessary.

Tolerance to this drug and cross-tolerance to other nitrates and nitrites may occur. Tolerance to the vascular and antianginal effects of isosorbide dinitrate or nitroglycerin has been demonstrated in clinical trials, experience through occupational exposure, and in isolated tissue experiments in the laboratory. The importance of tolerance to the appropriate use of isosorbide dinitrate in the management of patients with angina pectoris has not been determined. However, one clinical trial using treadmill exercise tolerance (as an end point) found an 8-hour duration of action of oral isosorbide dinitrate following the first dose (after a 2-week placebo washout) and only a 2-hour duration of effect of the same dose after 1 week of repetitive dosing at conventional dosing intervals. On the other hand, several trials have been able to differentiate isosorbide dinitrate from placebo after 4 weeks of therapy and, in open trials, an effect seems detectable for as long as several months.

Tolerance clearly occurs in industrial workers continuously exposed to nitroglycerin. Moreover, physical dependence also occurs since chest pain, acute myocardial infarction, and even sudden death have occurred during temporary withdrawal of nitroglycerin from the workers. In clinical trials in angina patients, there are reports of anginal attacks being more easily provoked and of rebound in the hemodynamic effects soon after nitrate withdrawal. The relative importance of these observations to the routine, clinical use of isosorbide dinitrate is not known. However, it seems prudent to gradually withdraw patients from isosorbide dinitrate when the therapy is being terminated, rather than stopping the drug abruptly.

Information for Patients: Headache may occur during initial therapy with SORBITRATE. Headache is usually relieved by the use of standard headache remedies or by lowering the dose and tends to disappear after the first week or two of use.

Drug Interactions: Alcohol may enhance any marked sensitivity to the hypotensive effect of nitrates.

Isosorbide dinitrate acts directly on vascular smooth muscle; therefore, any other agent that depends on vascular smooth muscle as the final common path can be expected to have decreased or increased effect depending on the agent.

Carcinogenesis, Mutagenesis, Impairment of Fertility: No long-term studies in animals have been performed to evaluate the carcinogenic potential of this drug. A modified two-litter reproduction study in rats fed isosorbide dinitrate at 25 or 100 mg/kg/day did not reveal any effects on fertility or gestation or any remarkable gross pathology in any parent or offspring fed isosorbide dinitrate as compared with rats fed a basal-controlled diet.

Pregnancy Category C: Isosorbide dinitrate has been shown to cause a dose-related increase in embryotoxicity (increase in mummified pups) in rabbits at oral doses 35 and 150 times the maximum recommended human daily dose. There are no adequate and well-controlled studies in pregnant women. SORBITRATE should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers: It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when SORBITRATE is administered to a nursing woman.

Pediatric Use: The safety and effectiveness of SORBITRATE in children has not been established.

ADVERSE REACTIONS: Adverse reactions, particularly headache and hypotension, are dose-related. In clinical trials at various doses, the following have been observed:

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DOSAGE AND ADMINISTRATION: For the treatment of angina pectoris, the usual starting dose for sublingual SORBITRATE is 2.5 to 5 mg; for chewable tablets, 5 mg; for oral (swallowed) tablets, 5 to 20 mg; and for controlled-release forms, 40 mg.

SORBITRATE should be titrated upward until angina is relieved or side effects limit the dose. In ambulatory patients, the magnitude of the incremental dose increase should be guided by measurements of standing blood pressure.

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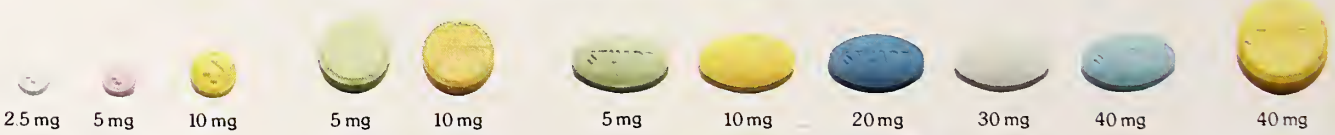


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See preceding page for brief summary of prescribing information.

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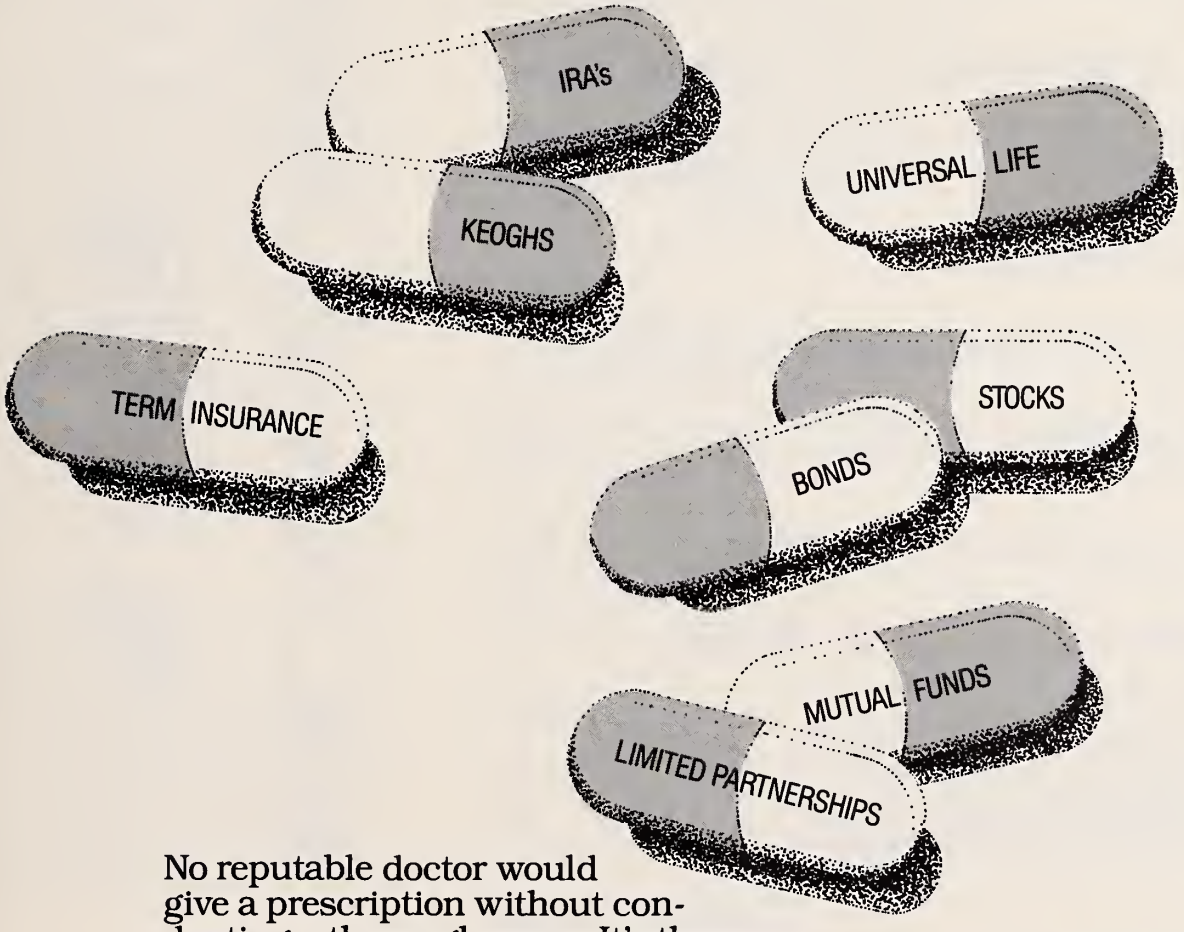
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COVER

Breast cancer, this month's highlighted topic, is the subject of Dr. Bill Mitchell's editorial on p. 752 and Drs. Bob Johnson and Bob Carroll's articles in the CANCER section on pp. 756-759.

Cover photo and those on pp. 752 and 756 by Chuck Rogers, Atlanta. Credit and thanks are also due Mr. Rogers for his innovative and creative ideas in the redesign of this issue of the *Journal*. Dr. Woody's editorial on p. 751 further discusses the *Journal's* new design.

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Questions About Dietary Recommendations for Hemoccult Screening

Dear Editor:

I read with interest the recent article in the *JMAG* by Dr. Phillip L. Roberts concerning hemoccult screening for colorectal carcinoma (*JMAG* 74:588, 1985). However, I am a little confused as to the pretesting dietary recommendations. Dr. Roberts suggests that if the stool specimen is rehydrated prior to testing it would be advisable to avoid red meat, fresh vegetables, and fruit for approximately 3 days prior to testing. If the specimen is not rehydrated, a restricted diet is not necessary. The directions which come with the Hemoccult II starter package recommend:

1. Eat no rare meat, turnips, or horseradish.
2. Eat plenty of vegetables, both raw and cooked, especially advised are lettuce, spinach, and corn.
3. Eat plenty of fruit, especially prunes, grapes, plums, and apples.

I would appreciate it very much if you would clarify the apparent discrepancy between Dr. Roberts' and the starter package's recommendations. I think it is very important for physicians who are using the Hemoccult Test to provide their patients with the most appropriate pretest dietary recommendations.

Sincerely,
George H. Nelson, Ph.D., M.D.
Professor and Chief
Obstetrical Laboratories
Medical College of Georgia

Author's Reply

I think the easiest way to reconcile the recommendations made by me[1] with those published by Smith-Kline is to note that they would be unaware whether or not the specimens are rehydrated prior to testing, and in their recommendations, are attempting to cover either eventuality. Everyone agrees that with rehydration of the slides, dietary restriction is necessary in order to reduce the number of false-positive tests. The issue is whether the tests should routinely be done with hydration, and, if not, whether the same dietary restrictions apply. A further question addressed is the role of high stool residue to enhance bleeding of existing colon lesions in an attempt to increase the sensitivity of the test.

The Hemoccult test does not detect blood but rather one of its constituents, peroxidase. Peroxidase is not specific for blood and is found in high quantities in certain fresh fruits and vegetables. In a carefully designed cross-over study reported by MacRae, et al.,[2] 156 apparently healthy subjects were studied with regard to peroxidase content of their diet both with and without rehydration of the stool specimens. On a high peroxidase diet including 250 gms. of rare steak, 3 of 156 subjects (2%) had one or more positive tests when the slides were un-rehydrated. With hydration, 26 subjects (17%) had one or more positive tests. When on a strict low peroxidase diet, 2 of 52 subjects (4%) had one or more positive tests with rehydration. This suggests that the number of false-positive tests is not significantly different between a full challenge diet, unrehydrated, and a restricted diet with rehydration. The remaining problem is loss of sensitivity. If the study population can be relied upon to adhere to rigid dietary restrictions, it is best to rehydrate the specimens. However, in a screening program with reduced compliance, rehydration has potential for producing excessive numbers of false-positive tests and result in expensive and potentially harmful diagnostic procedures. Furthermore, an inconvenient diet will reduce participation and could actually decrease the number of colon cancers detected. A positive stool hemoccult when not hydrated, nonetheless, should prompt evaluation for the source of bleeding regardless of the dietary history. It is not helpful and is ill advised to repeat the test after dietary restriction since the rate of false positives is not significantly changed, and colon cancers are known to bleed intermittently.

In regard to the fiber content of the diet effecting the bleeding from colon lesions, less information is available. Existing information, however, does not support this. In the study cited,[2] adding bran to the diet did not increase the number of positive tests in normal subjects. Hellerstein, et al.[3] studied 16 patients with known gastrointestinal lesions and 15 normal controls. A 20 gm fiber diet did not increase bleeding from either the patients or the control group as determined by hemoccult testing and ^{51}Cr assay of stools. They concluded that increased dietary fiber does not increase the sensitivity of the Hemoccult test in detecting colon polyps. Alternatively, resulting increased volume of stool could dilute the blood and result in a false-negative test. If the high fiber diet contained high peroxidase vegetables, a false-positive test could also result. Following a careful review of this subject, Simon[4] concluded: "On available evidence, use of a high residue diet for occult blood testing appears arbitrary and without scientific validation."

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1. Roberts PL. Hemoccult screening for colorectal carcinoma. J Med Assoc Ga 1985;74:588.
2. MacRae FA, et al. Optimal dietary conditions for hemoccult testing. Gastroenterol 1982;82:899.
3. Hellerstein SM, Vanagunas A, Ostrow JD, Hammond JB. Gastroenterology (abstract) 1982;82:1082.
4. Simon JB. Occult blood screening for colorectal carcinoma: a critical review. Gastroenterol 1985;88:820.

Sincerely,
Phillip L. Roberts, M.D.
Oncologist
Albany ■

Thank You, Hilt



William D. Logan, Jr., M.D.

I have just returned from the funeral of a friend. There are feelings of emptiness and frustration. Questions of why and even, what's it all about, anyway, emerge from the corners of my thoughts.

Hilt Hammett was born in 1917, in LaGrange, Georgia, finished Emory University School of Medicine in 1941, and practiced his profession in LaGrange (Troup County), Georgia. He died August 19, 1985, from complications following surgery for coronary artery disease.

I look and see a note on my desk reminding me the President's Page for November is due. November always brings thoughts of Thanksgiving, but initially, my thoughts are not very thankful. Yet on further consideration, perhaps they are. I will list them:

Thank you, Hilt, for being a physician who studied and dedicated your life to helping your fellow man live in more physical comfort.

Thank you for your leadership. Your strength and vision showed a way for many to follow toward improvement for all.

Thank you, Hilt, for being a concerned citizen. You devoted many hours to making your community a better place in which to live.

Thank you for being a parent. Only another parent can understand the pride, the joy, the fear, and the occasional agony associated with rearing offspring; and know the need for being there. Bea and I shared some of these experiences with you.

Thank you, Hilt, for being a friend. I knew you only for about 10 years, but in that short time your warmth, concern, and support meant much to me and my wife.

Thank you, Hilt, for your thoughtfulness toward my children. In a short time, your sincerity touched our two daughters with beautiful remembrances which are mentioned frequently. Our son recently spoke quietly of you, remembering the personal interest and encouragement that you so genuinely gave him.

Thank you for being human, with a few flaws that could be criticized. None of us is perfect. Much more could be said, but let me end this.

Thank you, Hilt, for living a life which touched others. I am thankful to have known you. I believe this is what it's all about.

Farewell, my friend. We shall miss you indeed.

Thank you for letting me share these thoughts with you. I wish you and your families a very special and happy Thanksgiving.

Sincerely,

Wm. D Logan Jr.

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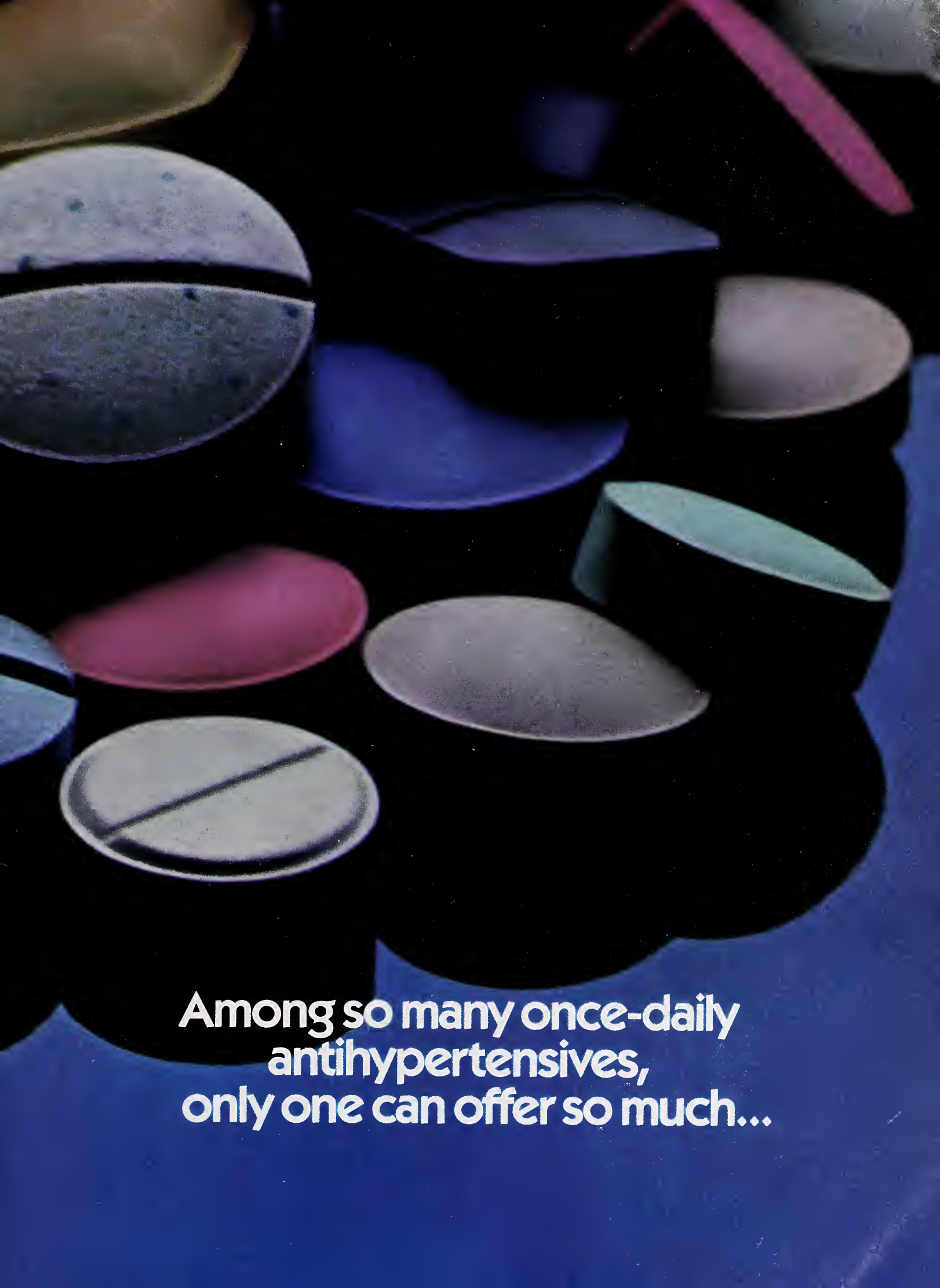
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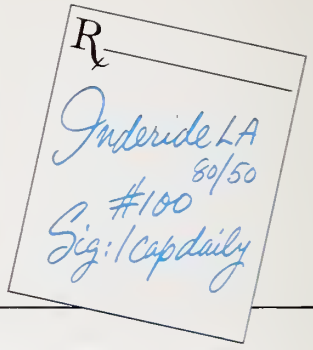
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Hydrochlorothiazide . . . . . 50 mg

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INDERIDE LA is indicated in the management of hypertension.

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CONTRAINDICATIONS

Propranolol hydrochloride (INDERAL®):
Propranolol is contraindicated in: 1) cardiogenic shock; 2) sinus bradycardia and greater than first degree block; 3) bronchial asthma; 4) congestive heart failure (see WARNINGS) unless the failure is secondary to a tachyarrhythmia treatable with propranolol

Hydrochlorothiazide:
Hydrochlorothiazide is contraindicated in patients with anuria or hypersensitivity to this or other sulfonamide-derived drugs.

WARNINGS

Propranolol hydrochloride (INDERAL®):
CARDIAC FAILURE: Sympathetic stimulation may be a vital component supporting circulatory function in patients with congestive heart failure, and its inhibition by beta blockade may precipitate more severe failure. Although beta blockers should be avoided in overt congestive heart failure, if necessary, they can be used with close follow-up in patients with a history of failure who are well compensated, and are receiving digitalis and diuretics. Beta-adrenergic blocking agents do not abolish the inotropic action of digitalis on heart muscle.

IN PATIENTS WITHOUT A HISTORY OF HEART FAILURE, continued use of beta blockers can, in some cases, lead to cardiac failure. Therefore, at the first sign or symptom of heart failure, the patient should be digitalized and/or treated with diuretics, and the response observed closely, or propranolol should be discontinued (gradually, if possible).

IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following abrupt discontinuance of propranolol therapy. Therefore, when discontinuance of propranolol is planned, the dosage should be gradually reduced and the patient carefully monitored. In addition, when propranolol is prescribed for angina pectoris, the patients should be cautioned against interruption or cessation of therapy without the physician's advice. If propranolol therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute propranolol therapy and take other measures appropriate for the management of unstable angina pectoris. Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease who are given propranolol for other indications.

THYROTOXICOSIS: Beta blockade may mask certain clinical signs of hyperthyroidism. Therefore, abrupt withdrawal of propranolol may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm. Propranolol does not distort thyroid function tests.

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker. In one case this resulted after an initial dose of 5 mg propranolol.

MAJOR SURGERY: The necessity or desirability of withdrawal of beta-blocking therapy prior to major surgery is controversial. It should be noted, however, that the impaired ability of the heart to respond to reflex adrenergic stimuli may augment the risks of general anesthesia and surgical procedures.

Nonallergic Bronchospasm (eg, chronic bronchitis, emphysema)—PATIENTS WITH BRONCHOSPASTIC DISEASES SHOULD, IN GENERAL, NOT RECEIVE BETA BLOCKERS. INDERAL should be administered with caution since it may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta receptors.

DIABETES AND HYPOGLYCEMIA: Beta-adrenergic blockade may prevent the appearance of certain premonitory signs and symptoms (pulse rate and pressure changes) of acute hypoglycemia in labile insulin-dependent diabetes. In these patients, it may be more difficult to adjust the dosage of insulin. Hypoglycemic attacks may be accompanied by a precipitous elevation of blood pressure.

Hydrochlorothiazide:
Thiazides should be used with caution in severe renal disease. In patients with renal disease, thiazides may precipitate azotemia. In patients with impaired renal function, cumulative effects of the drug may develop.

Thiazides should also be used with caution in patients with impaired hepatic function or progressive liver disease, since minor alterations of fluid and electrolyte balance may precipitate hepatic coma.

Thiazides may add to or potentiate the action of other antihypertensive drugs. Potentiation occurs with ganglionic or peripheral adrenergic-blocking drugs.

Sensitivity reactions may occur in patients with a history of allergy or bronchial asthma.

The possibility of exacerbation or activation of systemic lupus erythematosus has been reported.

PRECAUTIONS

Propranolol hydrochloride (INDERAL®):
GENERAL: Propranolol should be used with caution in patients with impaired hepatic or renal function. Propranolol is not indicated for the treatment of hypertensive emergencies.

Beta-adrenoreceptor blockade can cause reduction of intraocular pressure. Patients should be told that propranolol may interfere with the glaucoma screening test. Withdrawal may lead to a return of increased intraocular pressure.

CLINICAL LABORATORY TESTS: Elevated blood urea levels in patients with severe heart disease, elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase.

DRUG INTERACTIONS: Patients receiving catecholamine-depleting drugs, such as reserpine, should be closely observed if propranolol is administered. The added catecholamine-blocking action may produce an excessive reduction of resting sympathetic nervous activity, which may result in hypotension, marked bradycardia, vertigo, syncopal attacks, or orthostatic hypotension.

CARCINOGENESIS, MUTAGENESIS, IMPAIRMENT OF FERTILITY: Long-term studies in animals have been conducted to evaluate toxic effects and carcinogenic potential. In 18-month studies, in both rats and mice, employing doses up to 150 mg/kg/day, there was no evidence of significant drug-induced toxicity. There were no drug-related tumorigenic effects at any of the dosage levels. Reproductive studies in animals did not show any impairment of fertility that was attributable to the drug.

PREGNANCY: Pregnancy Category C. Propranolol has been shown to be embryotoxic in animal studies at doses about 10 times greater than the maximal recommended human dose. There are no adequate and well-controlled studies in pregnant women. Propranolol should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

NURSING MOTHERS: Propranolol is excreted in human milk. Caution should be exercised when propranolol is administered to a nursing mother.

PEDIATRIC USE: Safety and effectiveness in children have not been established.

Hydrochlorothiazide:
GENERAL: Periodic determination of serum electrolytes to detect possible electrolyte imbalance should be performed at appropriate intervals.

All patients receiving thiazide therapy should be observed for clinical signs of fluid or electrolyte imbalance, namely: hyponatremia, hypochloremic alkalosis, and hypokalemia. Serum and urine electrolyte determinations are particularly important when the patient is vomiting excessively or receiving parenteral fluids. Medication such as digitalis may also influence serum electrolytes. Warning signs, irrespective of cause, are: Dryness of mouth, thirst, weakness, lethargy, drowsiness, restlessness, muscle pains or cramps, muscular fatigue, hypotension, oliguria, tachycardia, and gastrointestinal disturbances such as nausea and vomiting.

Hypokalemia may develop, especially with brisk diuresis, when severe cirrhosis is present, or during concomitant use of corticosteroids or ACTH.

Interference with adequate oral electrolyte intake will also contribute to hypokalemia. Hypokalemia can sensitize or exaggerate the response of the heart to the toxic effect of digitalis (eg, increased ventricular irritability). Hypokalemia may be avoided or treated by use of potassium supplements, such as foods with a high potassium content.

Any chloride deficit is generally mild and usually does not require specific treatment, except under extraordinary circumstances (as in liver or renal disease). Dilutional hyponatremia may occur in edematous patients in hot weather; appropriate therapy is water restriction, rather than administration of salt, except in rare instances when the hyponatremia is life-threatening. In actual salt depletion, appropriate replacement is the therapy of choice.

Hyperuricemia may occur or frank gout may be precipitated in certain patients receiving thiazide therapy.

Insulin requirements in diabetic patients may be increased, decreased, or unchanged. Diabetes mellitus which has been latent may become manifest during thiazide administration.

If progressive renal impairment becomes evident, consider withholding or discontinuing diuretic therapy.

Thiazides may decrease serum PBI levels without signs of thyroid disturbance.

Calcium excretion is decreased by thiazides. Pathologic changes in the parathyroid gland with hypercalcemia and hypophosphatemia have been observed in a few patients on prolonged thiazide therapy. The common complications of hyperparathyroidism, such as renal lithiasis, bone resorption, and peptic ulceration have not been seen. Thiazides should be discontinued before carrying out tests for parathyroid function.

DRUG INTERACTIONS: Thiazide drugs may increase the responsiveness to tubocurarine.

The antihypertensive effects of thiazides may be enhanced in the postsympathectomy patient. Thiazides may decrease arterial responsiveness to norepinephrine. This diminution is not sufficient to preclude effectiveness of the pressor agent for therapeutic use.

PREGNANCY: Pregnancy Category C. Thiazides cross the placental barrier and appear in cord blood. The use of thiazides in pregnancy requires that the anticipated benefit be weighed against possible hazards to the fetus. These hazards include fetal or neonatal jaundice, thrombocytopenia, and possibly other adverse reactions which have occurred in the adult.

NURSING MOTHERS: Thiazides appear in human milk. If use of the drug is deemed essential, the patient should stop nursing.

PEDIATRIC USE: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS

Propranolol hydrochloride (INDERAL®):
Most adverse effects have been mild and transient and have rarely required the withdrawal of therapy.

Cardiovascular: Bradycardia; congestive heart failure; intensification of AV block; hypotension; paresthesia of hands; thrombocytopenic purpura; arterial insufficiency, usually of the Raynaud type.

Central Nervous System: Lightheadedness; mental depression manifested by insomnia, lassitude, weakness, fatigue; reversible mental depression progressing to catatonia; visual disturbances; hallucinations; an acute reversible syndrome characterized by disorientation for time and place; short-term memory loss; emotional lability; slightly clouded sensorium; and decreased performance on neuropsychometrics.

Gastrointestinal: Nausea, vomiting, epigastric distress, abdominal cramping, diarrhea, constipation, mesenteric arterial thrombosis, ischemic colitis.

Allergic: Pharyngitis and agranulocytosis, erythematous rash, fever combined with aching and sore throat; laryngospasm and respiratory distress.

Respiratory: Bronchospasm.

Hematologic: Agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpura.

Auto-Immune: In extremely rare instances, systemic lupus erythematosus has been reported.

Miscellaneous: Alopecia; LE-like reactions; psoriasiform rashes; dry eyes; male impotence; and Peyronie's disease have been reported rarely. Oculomucocutaneous reactions involving the skin, serous membranes, and conjunctivae reported for a beta blocker (practolol) have not been associated with propranolol.

Hydrochlorothiazide:
Gastrointestinal: Anorexia; gastric irritation, nausea, vomiting, cramping, diarrhea, constipation; jaundice (intrahepatic cholestatic jaundice); pancreatitis; sialadenitis.

Central Nervous System: Dizziness, vertigo, paresthesias, headache, xanthopsia.

Hematologic: Leukopenia, agranulocytosis, thrombocytopenia, aplastic anemia.

Cardiovascular: Orthostatic hypotension (may be aggravated by alcohol, barbiturates or narcotics).

Hypersensitivity: Purpura, photosensitivity; rash; urticaria, necrotizing angiitis (vasculitis, cutaneous vasculitis), fever; respiratory distress, including pneumonitis; anaphylactic reactions.

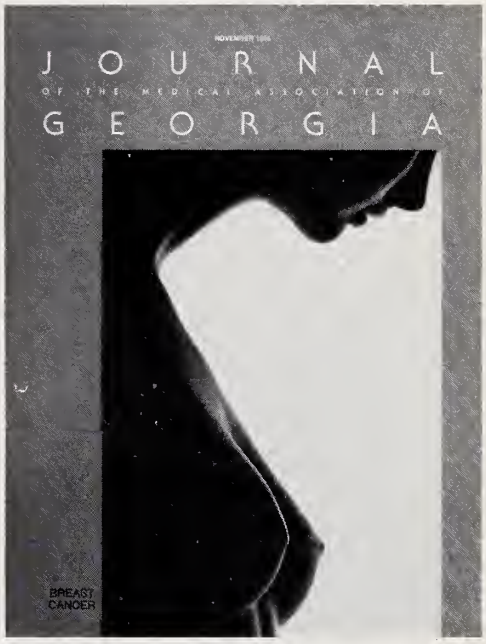
Other: Hyperglycemia, glycosuria; hyperuricemia, muscle spasm; weakness, restlessness; transient blurred vision.

Whenever adverse reactions are moderate or severe, thiazide dosage should be reduced or therapy withdrawn.

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We are pleased to inaugurate this new design of the* Journal, *trusting to improve it and make it more attractive and easily read.

With this November, 1985, issue, we are introducing an entirely new design for the Journal *to enhance its overall attractiveness and readability. Many of our readers have noticed and commented favorably on some of the changes in the inside layout (some ''small steps'') which we have implemented this past year. We much appreciate this positive feedback.*

Working with our photographer/designer, Chuck Rogers, we are pleased to inaugurate this whole new design and take ''one giant step'' forward to improve your Journal, *to make it more attractive and easily read.*

The functions of the Journal *will not be changed nor will the general content: to serve as the official record for Association activities and business; to provide a vehicle for the publication of scientific and special articles by George physicians; and to keep our members informed of the activities of their peers, the workings of government at all levels as it involves the practice of medicine, and developments in the many areas which relate to health care delivery.*

The old design has been used for over 10 years, having been introduced in January of 1974. With this newer, more modern design, we still have the same basic department headings but have shortened some of their names: for example ''Heart,'' ''Legal,'' ''Cancer'' (without the word ''Page'' — it's been many years since they were a page long), and ''Calendar'' for Medical Meeting Calendar.

We trust these changes will make the Journal *more pleasing to your eye and therefore read more thoroughly. Let us hear from you; we'd like to know your impressions.*

Edgar Woody, M.D.

Breast Cancer Therapy: Doing Better But Feeling Worse

Management of breast cancer used to be simple because there was one standard treatment and very few decisions had to be made. That is not the situation today.

MANY SURGEONS apparently share my feeling of increasing malaise about management of patients with breast cancer. This may seem peculiar to our non-surgical colleagues, since the last decade has seen significant developments which help us treat breast cancer better. We now have better mammography screening techniques, improved breast sonography, statistical support for the effectiveness of less extensive surgical procedures, better reconstruction, better in-bra prostheses, a clearer picture of the role of adjuvant hormone and chemotherapy, better hormone sensitivity assays, and a patient population which accepts screening mammography and practices breast self examination much more widely than 10 years ago.

Why, then, if we are actually doing better, do we feel worse about it? Some explanations come to mind immediately. We are dismayed and alarmed about incursions of the legislature into areas that they know very little about. We resent shrill accusations by feminists (and some holier-than-thou physicians) that surgeons are concerned only with higher fees and are insensitive to women's concerns. We are appalled at misleading and premature publicity touting "breakthroughs in breast cancer therapy" which are really nothing of the kind, yet we must worry about appearing to be "out-of-date" when patients ask us about the article in last night's newspaper which we haven't seen and



probably wouldn't have believed if we had. We are apprehensive about trying to deal technically and emotionally with patients who have breast and chest-wall recurrences when lumpectomy and radiation fail, as they surely will at times. We are concerned about the long-term effect of radiation on breast tissue which has already demonstrated its propensity for development of cancer.

We feel buffeted by flip-flop advice from experts who told us last year to stop doing "one-step" biopsy/surgical procedures, only to be told this year that "two-step" is really not good either and that "one-step" is better after all. We are also disturbed at being told over and over that the operation that we were doing in good conscience a few years ago, or even last year, was "needless and mutilating," "unnecessary," and "based on greed." No physician ever likes to discover that he/she has been doing the "wrong thing," particularly when it is "mutilating." I have never known a surgeon who really liked to do a mastectomy. It simply isn't enjoyable surgery, even when we know it needs to be done. And now we are told that those mastectomies were pointless and that our motives are suspect. It has all become a bit hard to bear with grace and equanimity.

What can we do? First of all, it helps to realize that other surgeons share our feelings of discomfort. It also helps to remember that in most instances the patient is a lot more upset by the apparent confusion than we are. It may be awkward for us, but it is much worse for her. Perhaps we should consciously abandon our cloaks of omniscience and omipotence in discussing management of breast cancer with our patients and spend time candidly reviewing the areas of uncertainty and misinformation that are bothering all of us, patients and surgeons alike. It is clear that the days of paternalism in dealing with patients are gone; surprisingly, it is often a relief to be able to discuss frankly with patients the things that are controversial in the management of their problems, though we must always be careful not to abdicate our responsibility for giving our best advice.

Almost all physicians feel a need to stay up-to-date with the medical literature, so there is really nothing new about that; where we do have to be more careful now is with the general circulation newspapers and magazines that bombard the public with information about breast cancer. It is very annoying to have to keep up-to-date with what newspapers and magazines are saying, but in the long run it probably is worthwhile having someone in our family or office make a point of calling our attention to such articles. I also find it very helpful to suggest to patients early in our discussion of their breast cancer that they may benefit by seeking a second opinion. This serves two purposes. First, it assures the patient that my feelings will not be hurt if they seek additional consultation, and second, it keeps my feelings from actually being hurt. When patients choose to get a second opinion, I can assure myself that they did so because I suggested it rather than because they don't trust me. It is also desirable to provide written information that discusses the various therapeutic alternatives. This gives patient and family something to refer to when they get home and helps demonstrate that nothing is being kept from them. In addition, written materials help patients discuss breast cancer more confidently with their friends, thus helping to neutralize one of the most common sources of confusing misinformation.

Management of breast cancer used to be simple because there was one standard treatment and very few decisions had to be made. Management is certainly no longer simple, and there is no single standard treatment. With an increase in the number of options, however, has come the necessity to make difficult decisions, and this is inevitably accompanied by some temporary discomfort for patients and physicians. Nevertheless, I am encouraged in the belief that we may eventually be better physicians for having learned to discuss problems and share decision-making with our patients, to our mutual benefit.

William E. Mitchell, Jr., M.D.
Surgeon, Atlanta

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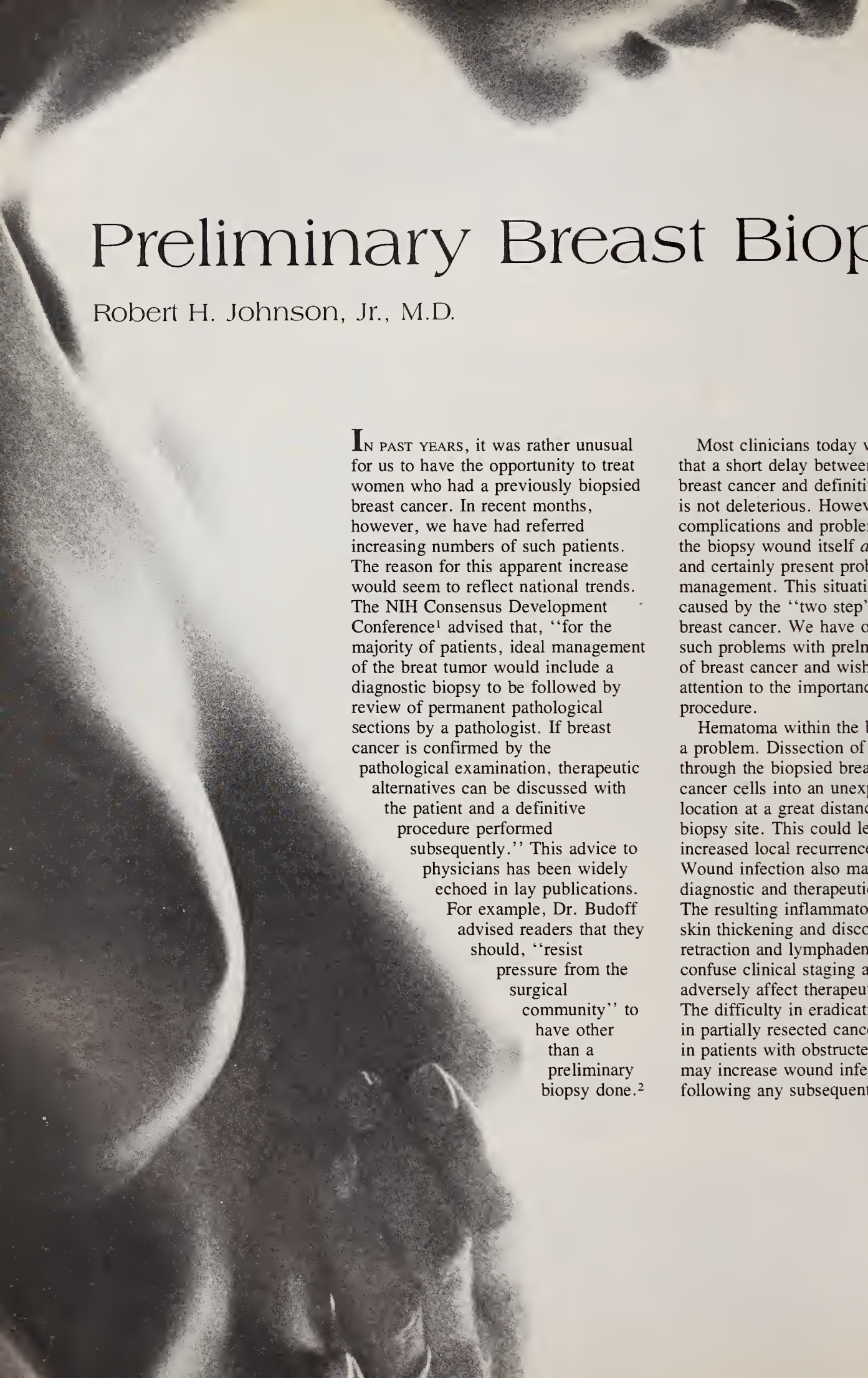
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Preliminary Breast Biopsy

Robert H. Johnson, Jr., M.D.

In past years, it was rather unusual for us to have the opportunity to treat women who had a previously biopsied breast cancer. In recent months, however, we have had referred increasing numbers of such patients. The reason for this apparent increase would seem to reflect national trends. The NIH Consensus Development Conference[1] advised that, "for the majority of patients, ideal management of the breat tumor would include a diagnostic biopsy to be followed by review of permanent pathological sections by a pathologist. If breast cancer is confirmed by the pathological examination, therapeutic alternatives can be discussed with the patient and a definitive procedure performed subsequently." This advice to physicians has been widely echoed in lay publications. For example, Dr. Budoff advised readers that they should, "resist pressure from the surgical community" to have other than a preliminary biopsy done.[2]

Most clinicians today would agree that a short delay between biopsy of a breast cancer and definitive treatment is not deleterious. However, complications and problems related to the biopsy wound itself *are* deleterious and certainly present problems in management. This situation has been caused by the "two step" approach to breast cancer. We have observed *many* such problems with prelminary biopsy of breast cancer and wish to call attention to the importance of this procedure.

Hematoma within the breast is such a problem. Dissection of blood widely through the biopsied breast could carry cancer cells into an unexpected location at a great distance from the biopsy site. This could lead to increased local recurrence rates. Wound infection also may cause both diagnostic and therapeutic dilemmas. The resulting inflammatory edema, skin thickening and discoloration, retraction and lymphadenitis may confuse clinical staging and thus adversely affect therapeutic decisions. The difficulty in eradicating infection in partially resected cancer, especially in patients with obstructed lymphatics, may increase wound infection rates following any subsequent surgical

procedure. Certainly infection in the biopsy wound *will* delay definitive treatment. Poorly planned excisional biopsy incisions that invade the axilla, violate the pectoral fascia or those in the periphery of the breast that expose the serratus anterior muscle or the presternal fascia may result in a tumor-contaminated wound that cannot be encompassed by even a radical mastectomy. The nature and location of the biopsy wound itself may actually eliminate treatment options by dictating what potentially curative treatment must be. Finally, all too often we have observed that the surgeon performing the preliminary biopsy has omitted submitting tumor tissue for determination of hormone receptors.

It is important that biopsy of the breast should not be thought of as an end in itself, but as a vital step in the continuum of total care to the breast cancer patient. After all, the principle reason to perform a breast biopsy is to detect and treat breast cancer. This should be borne firmly in mind by the surgeon performing the biopsy. It is crucial that it be done thoughtfully so as not to handicap or prejudice later definitive treatment. Careful preoperative staging should always be done. The size and exact location of the mass should be recorded, and a careful search for skin and fascial signs as well as regional adenopathy should be carried out. Consideration should be given to the best form of treatment should a breast cancer be detected and the biopsy incision planned accordingly. For larger lesions, and for those adjacent to the pectoral fascia or at the periphery of the breast, incisional biopsies are appropriate. Tissue should invariably be sent for determination of both estrogen and progesterone receptors. Close attention to basic surgical principles to insure absolute hemostasis and avoid infection and other wound complications is mandatory. By strict adherence to these details, the surgeon rendering definitive care will be presented not only with the diagnosis but also with all relevant data necessary to make an accurate decision regarding definitive treatment, in close accord with the patients wishes.

A short delay between biopsy of a breast cancer and definitive treatment is not deleterious.

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This article was prepared at the request of the Georgia Division, American Cancer Society.

Adjuvant Chemotherapy of Breast Cancer

Robert R. Carroll, M.D.

THE MAJORITY of women who have axillary lymph node invasion by breast cancer will eventually succumb to the disease. In most cases, the degree of involvement of the axillary lymph nodes serves as an indicator of the likelihood of distant metastases. Since recurrence rates at distant sights are so high when more than a few axillary nodes are involved, radical surgery to eradicate the local disease is often of little benefit in prolonging the patient's life. Adjuvant chemotherapy of breast cancer is the treatment not of clinical disease but of the probability (dictated by the degree of axillary node involvement) of developing clinical disease. It is based on the premise that a small amount of breast cancer is easier to permanently eradicate with chemotherapy than is a large amount. There are two legitimate goals of adjuvant chemotherapy — an increase in disease-free survival and an increase in overall survival. Obviously, if the disease-free survival is long enough, these two become equivalent. A few months of adjuvant therapy, to be worthwhile, should cause more than an equivalent number of months of disease-free survival; otherwise, we would only be proving that chemotherapy is effective in palliation of established breast cancer which is something we already know. The recent successes with adjuvant chemotherapy are promising, but the number of women likely to benefit from current treatment is small.

As diseases go, breast cancer may be quite variable in its clinical aggressiveness and in its response to treatment. Whether the patient is pre- or postmenopausal, the number of axillary nodes involved and the estrogen and progesterone receptor protein content of the tumor are important determinants of the clinical course the disease may follow. The results of clinical trials of adjuvant chemotherapy have shown these determinants to be important in predicting who will derive benefit from this type of treatment.

Most clinical trials have shown no benefit from adjuvant chemotherapy in postmenopausal women. Approximately 16 randomized trials of adjuvant chemotherapy in postmenopausal women have been reported. None of these trials has demonstrated an overall survival advantage to women who were treated with adjuvant chemotherapy, and only two of the 16 trials found an increase in disease-free survival after treatment.[1, 2] Retrospective attempts at grouping postmenopausal women who tolerated full doses of chemotherapy and comparing their outcomes with others who tolerated chemotherapy less well have been cited for their introduction of bias and lack of statistical validity.

Women who are premenopausal and have only a few involved nodes are the ones most likely to benefit from adjuvant chemotherapy.

The number of involved axillary nodes also seems to influence the outcome of adjuvant chemotherapy. As more nodes are involved, the efficacy of the treatment lessens. Recent studies have shown no significant benefit in women with more than 10 involved axillary nodes, and the benefits to women with four to 10 involved nodes seem to be marginal.[3]

Women who are premenopausal and have only a few involved nodes are the ones most likely to benefit from adjuvant chemotherapy. Currently, four studies have shown an increase in the disease-free survival rates of premenopausal women who were treated with adjuvant chemotherapy, and two of these studies have indicated an improvement in overall survival

rates as well. Recent results from the Milan trial of 6 months of adjuvant Cytoxan, Methotrexate, and 5 Flourouracil — now in its tenth year — has shown a 20% greater survival (at 9 years) in premenopausal women who were treated with adjuvant chemotherapy when compared to a control group treated with mastectomy alone.[4] The results of the National Surgical Adjuvant Breast Project Study would indicate that most of this improvement is in women with one to three involved axillary nodes.[5]

Adjuvant chemotherapy in breast cancer is a young technique. Since the methods are still evolving, it is difficult to define a standard of practice. Because the toxic effects of chemotherapy are considerable, this treatment should be limited to those in whom it has been clearly shown to be of benefit. In a disease as difficult to understand as breast cancer, the demonstration of this benefit will have to come from properly executed clinical trials. At this time, there is little rationale for adjuvant chemotherapy treatment of postmenopausal women or of women with greater than 10 involved axillary nodes.

Trials of hormonal adjuvant therapy are currently underway, but most of these studies are too young to provide meaningful information. Disease-free survival can certainly be prolonged in some patients by the administration of hormones, but so far, there does not appear to be an overall survival advantage to this form of treatment. Finally, in women with large numbers of involved axillary nodes, postoperative radiotherapy has been shown to be effective in preventing local recurrences, though this does not improve overall survival.[6]

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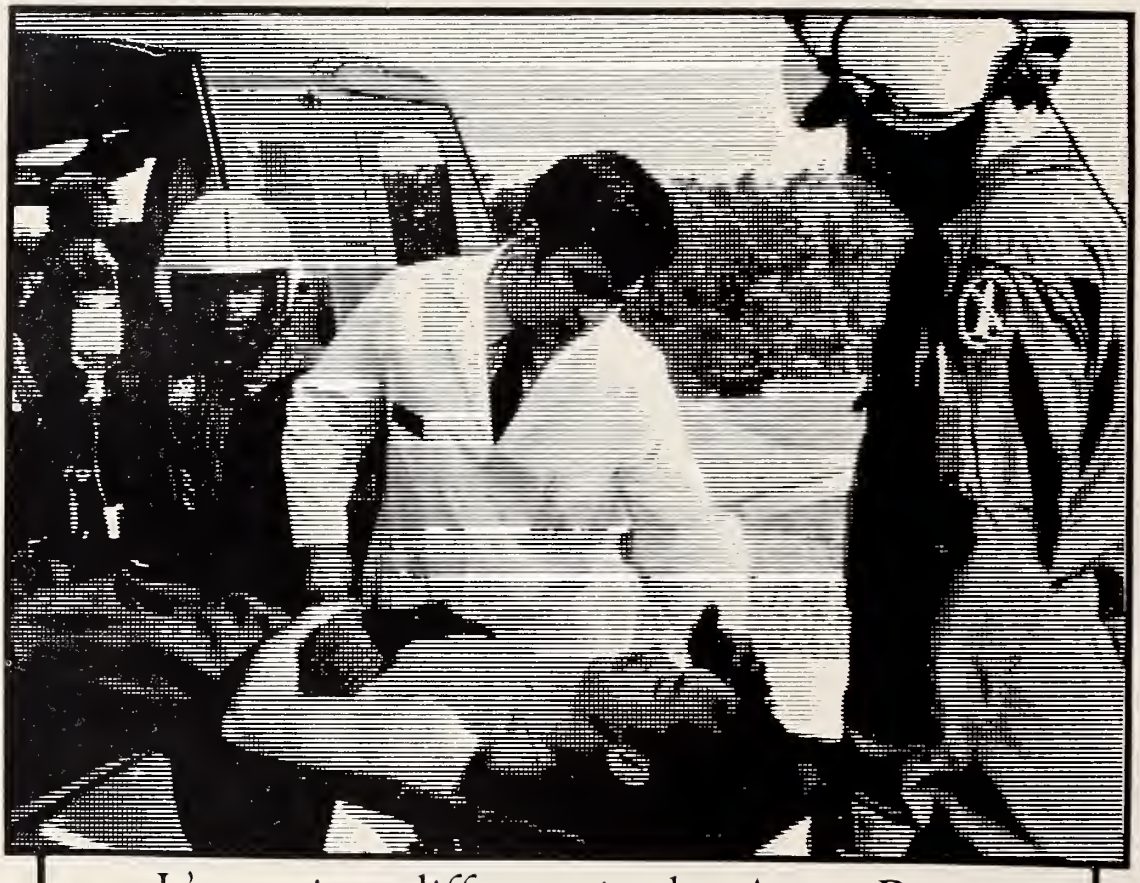
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Adjuvant chemotherapy of breast cancer is the treatment not of clinical disease but of the probability of developing clinical disease.

Dr. Carroll practices internal medicine and hematology. Send reprint requests to him at 500 Third Ave., Ste. 109, Albany, GA 31701.

Prepared at the request of the Georgia Division, American Cancer Society. Others wishing to contribute papers are invited to send them to T. Gray Fountain, M.D., Cancer Section Editor, 910 N. Jefferson, Albany, GA 31708.

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DROWNINGS IN GEORGIA

J. DAVID SMITH, B.S., JOEL BROWN, AND R. KEITH SIKES, D.V.M., M.P.H.

A descriptive epidemiologic analysis of drowning deaths from 1981-1983.

Abstract

In the period 1981-1983, a total of 547 residents of the State of Georgia drowned, accounting for an estimated 17,616 years of lost productive life. The death ratios from drowning were highest in males in the age group 10-29 years. Drownings occurred most frequently during the summer months and on Friday, Saturday, and Sunday. Ninety-five percent of the drownings reported were accidental. Educational efforts and enforcement of laws pertaining to swimming and boating safety are discussed.

Introduction

SINCE 1975, approximately 195 Georgia residents have died every year from drowning. For Georgians less than 30 years of age, drownings are second only to motor vehicle crashes as a cause of death due to unintentional injury.[1] In order to better understand the problem of drowning in Georgia, we reviewed death certificates which recorded drowning as the cause of death for the 3-year period 1981-1983. The results of this review suggest several specific interventions which might reduce the number of drownings in Georgia.

Methods

All death certificates for Georgia residents and out-of-state residents which recorded drowning (E Codes = 830, 832, 910.0-910.9, 917.2, and 964) as the cause of death, during the 3-year period 1981-1983, were obtained from the Vital Records Unit, Georgia Department of Human Resources. Water Death Investigation Reports were obtained from the Law Enforcement Section, Game and Fish Division, Georgia Department of Natural Resources, for the same time period. These two data sets were linked and abstracted to obtain demographic variables and location and date of drowning.

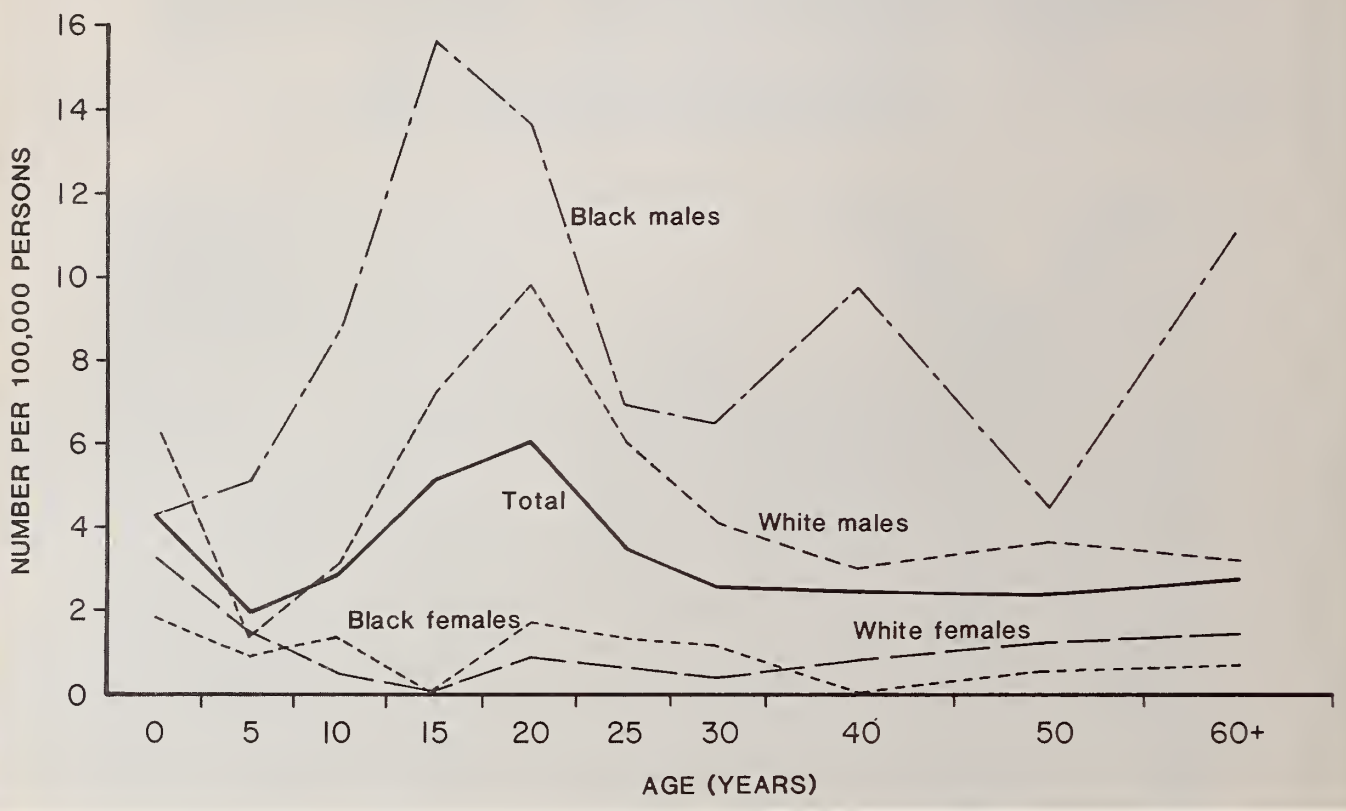
Population figures used to calculate rates were annual projections obtained from the Office of Planning and Budget, State of Georgia. The total years of life lost were determined by summating the differences in years between age at death for persons under 65 years of age and the age 65 years. The total number of visits to Lake Lanier was obtained from estimates compiled by the U. S. Army Corps of Engineers from on-going surveys.

Results

In the 3-year period 1981-1983, a total of 573 drownings occurred among Georgia residents and out-of-state visitors; 547 were state residents (53 residents of Georgia drowned out-of-state) and 26 were out-of-state residents who drowned in Georgia. The annual fatality rate for drowning for residents of Georgia was 3.2/100,000 population. The risk of drowning varied markedly by sex, race, and age (Figure 1). Males were much more likely to drown than females; 5.7 deaths versus 0.9 deaths per 100,000 population, respectively. The drowning fatality rate for blacks was 1.7 times greater than for whites; 4.5 deaths versus 2.7 deaths per 100,000 persons, respectively. The rate for black males was 1.9 times greater than that for white males, 8.6 deaths versus 4.6 deaths per 100,000 persons, respectively. The drowning rates were highest in males in the age group 10-29 years. The number of drownings which occurred among Georgia residents during the study period accounted for an annual estimated 5,872 years of lost productive life (Mean = 32.2 years of productive life lost/drowning).

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Fig. 1 Drowning rates, by age, race, and sex, Georgia, 1981–1983



Drowning deaths were markedly seasonal, being most frequent in June, with 74% occurring in the warmer months of May through September (Figure 2). Drownings tended to occur on weekends, with 54% occurring on Friday, Saturday, or Sunday.

The circumstances of the fatality were recorded

Table 1 — Drownings by Type, Race, and Sex, Georgia, 1981-1983

Type Drowning	*WM*	*WF*	*BM*	*BF*	*Total*
Accidental	262	47	192	19	520
Homicide	5	3	0	2	10
Suicide	4	7	1	1	13
Undetermined	2	0	1	1	4
TOTAL	273	57	194	23	547

Table 2 — Drowning by Type of Activity and Race and Sex Georgia, 1981-1983

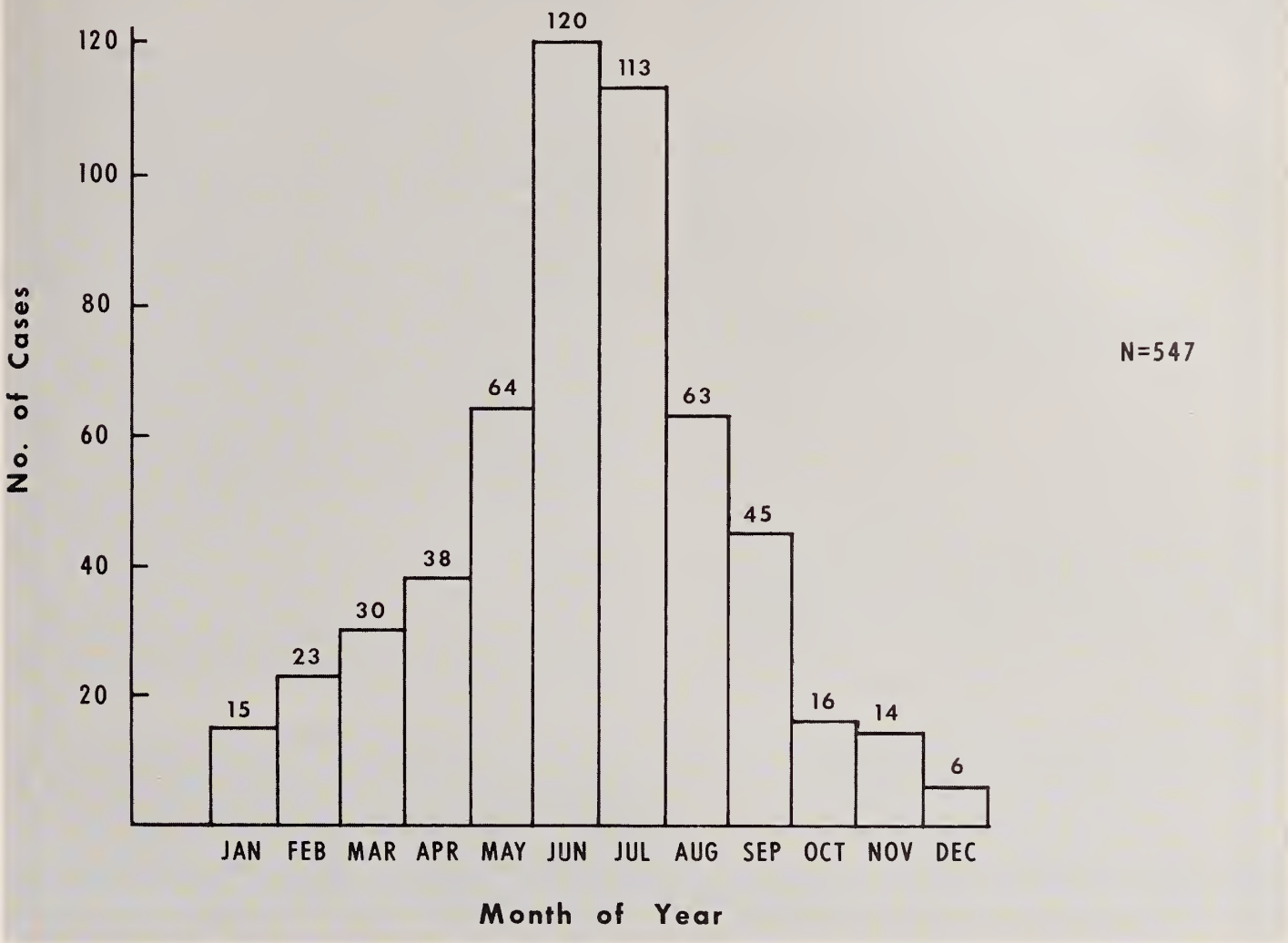
Activity	*WM*	*WF*	*BM*	*BF*	*Total*
Swimming	117	15	108	6	246
Falling into water	43	14	32	7	96
Boating	47	2	14	2	65
Bathing in tub	10	13	5	5	33
Wading	10	2	13	1	26
Save attempt	7	0	1	0	8
Fishing	2	1	4	0	7
Skiing	1	1	1	0	3
Other/Unknown	36	9	16	2	63
TOTAL	273	57	194	23	547

Table 3 — Drownings, by Health District of Occurrence, Georgia, 1981-1983

District	*Number of Drownings*	*Rate/100,000 Population*	*Percent Total Drownings*
1-1 (Rome)	23	2.1	4.2
1-2 (Dalton)	8	1.5	1.5
2-0 (Gainesville)	31	4.1	5.7
3-1 (Marietta)	15	1.3	2.7
3-2 (Atlanta)	33	1.8	6.0
3-3 (Jonesboro)	8	1.7	1.5
3-4 (Lawrenceville)	13	1.6	2.4
3-5 (Decatur)	17	1.1	3.1
4-0 (LaGrange)	38	3.5	6.9
5-1 (Dublin)	11	3.0	2.0
5-2 (Macon)	48	4.0	8.8
6-0 (Augusta)	40	3.7	7.3
7-0 (Columbus)	38	3.8	6.9
8-1 (Valdosta)	27	4.7	4.9
8-2 (Albany)	37	3.7	6.8
9-1 (Savannah)	25	3.7	4.6
9-2 (Waycross)	36	4.6	6.6
9-3 (Brunswick)	31	7.6	5.7
10 (Athens)	15	2.1	2.7
Out-of-State*	53	—	9.7
TOTAL	547	3.2	100.0

* Georgia residents who drowned Out-of-State.

Fig. 2: Drownings, by Month of Occurence, Georgia, 1981 – 1983



for 543 (99.3%) of the 547 drownings: 520 (95%) were accidental deaths, 10 were homicides, and 13 were suicides (Table 1). Of the accidental deaths,

Table 4 — Drownings, by Type of Water Body
Georgia, 1981-1983

Water Body	*Number of Drownings*	*Percent*
Lake*	249	45.5
River/Creek	140	25.6
Swimming Pool	75	13.7
Bathtub	33	5.9
Ocean	22	4.0
Canal	8	1.5
Drainage Ditch	6	1.1
Other/Unknown	14	2.7
TOTAL	547	100.0

* Includes: Lakes (160), Farm Ponds (53), Ponds (24), Borrow Pits (12)

drowning while swimming was the most frequent activity, with a total of 246 (47.3%) fatalities — the most for any category — and males accounted for 91% of these. Boating-related activities (excluding skiing) claimed 65 victims. Thirty-three drownings occurred in the bathtub; 11 of these victims were less than 1 year of age (median = 19 years). Table 2 shows race and sex distribution by type of water-related activity.

Drowning rates varied with the health district of occurrence. Health District 9-3 (Brunswick-rate = 7.6 fatal injuries from drowning/100,000 population) was the highest in the state (Table 3). Even in this coastal location, the majority of the drownings occurred in fresh water.

Drownings occurred in a variety of bodies of water (Table 4). Areas to which the public had general access accounted for 308 (56%) of the total number

of drownings. Lakes, ponds, and borrow pits* claimed 249 (45.5%) of the victims. The 10 largest lakes in the state accounted for 74/249 (30%) of these drownings. Lake Lanier, one of the most frequently visited lakes in the United States, accounted for 24 drownings, or 0.5 drownings per 100,000 visits to the lake.[2]

Discussion

Georgia death rates from drowning are lower than the national rates when compared for a comparable time period (2.7/100,000 versus 2.9/100,000 nationally for whites; 4.5 versus 5.4/100,000 nationally for blacks).[3] Nonetheless, certain groups of Georgians, particularly males, both black and white between the ages of 11 and 30 years and infants less than 1 year of age are at increased risk for drowning.

Consumption of alcohol while involved in water sports has been suggested as an important risk factor in drownings.

The vast majority of drownings which occur in Georgia might be preventable. Drownings in Georgia are predictable: they are largely associated with fresh water bodies, almost 75% occur during the period between early May and the end of September, and more than half occur on weekends when people tend to migrate to water bodies for relaxation and recreation.

Consumption of alcohol while involved in water sports has been suggested as an important risk factor in drownings.[4-6] In a current study of deaths due to injuries which is underway in 6 counties in Georgia, elevated blood alcohol levels were found in 4 of 12 drowning victims; all 4 of these victims were adult males.[7] In a study in New Zealand, at least half of the drowning victims had detectable postmortem blood alcohol levels, and 37% of those tested had a blood alcohol level greater than 100 mg per 100 ml blood. Remarkably, 75% of the fatalities related to boating had blood alcohol levels greater than 100 mg per 100 ml blood.[8] A preventive measure might include stringent enforcement of laws regarding operation of boats while under the influence of alcohol or other drugs.

* Borrow pit — a large hole or pit created by removal of clay that is used to construct a road base through swampy areas. This pit eventually fills with water and becomes a "man-made" lake.

Specific education programs directed at those age groups most likely to drown and provided in those geographic areas identified as having an increased incidence could heighten the awareness for water safety and the use of personal flotation devices (PFDs). Consideration should be given to the development of a statewide program to teach swimming and drown proofing. This program could be directed at those persons considered to be at highest risk, i.e., black males in particular and males in general. Safety programs stressing risk factors such as swimming alone in farm ponds and borrow pits, failure to use PFDs while boating, rafting, or canoeing, and swimming or boating while impaired by drugs or alcohol should be accelerated.

Bathing deaths might be sharply reduced by educating parents of infants of the danger of leaving their child in the bathtub unattended. Obstetricians/gynecologists, pediatricians, public health well-baby clinic nurses, and Agriculture Extention Service educators should be encouraged to warn young parents of the danger of leaving an infant alone in the bathtub.

Enclosing swimming pools with fencing with lockable gates would prevent young children from wandering into pool areas and possibly falling into the pool and drowning.

Farm pond owners should maintain a life saving device, a long pole or life ring, near the farm pond. This measure could be encouraged through contact with pond owners by the Agriculture Extension Service agents and by personnel from the Department of Natural Resources. Future Farmers of America and 4-H club safety projects could be involved in this educational process.

Safety programs stressing risk factors such as swimming alone in farm ponds and borrow pits, failure to use PFDs while boating, rafting, or canoeing, and swimming or boating while impaired by drugs or alcohol should be accelerated.

Permanent warning signs should be posted at locations where swimming conditions are dangerous and/or where two or more drownings have occurred.

Many questions were raised during our review of drownings which occurred in Georgia during this 3-year period. Some of these questions are: Why are adult males drowning while swimming? Is it because they do not know how to swim or are they swimming

while impaired by alcohol or drugs? Are they inexperienced swimmers who are swimming in unsafe locations and are they swimming alone? These areas need more research to determine specific risk factors for age groups and racial groups who are at highest risk.

Law Enforcement Officials of the Georgia Department of Natural Resources are genuinely concerned by the number of boating fatalities which are occurring around the state. Are the boaters who are involved in these fatal incidents impaired by the use of alcohol or drugs? Are PFDs being properly used by boaters? Are unsafe boating habits, such as excessive speed or negligent operation responsible for the boating fatalities? Further studies are warranted to answer many of these questions.

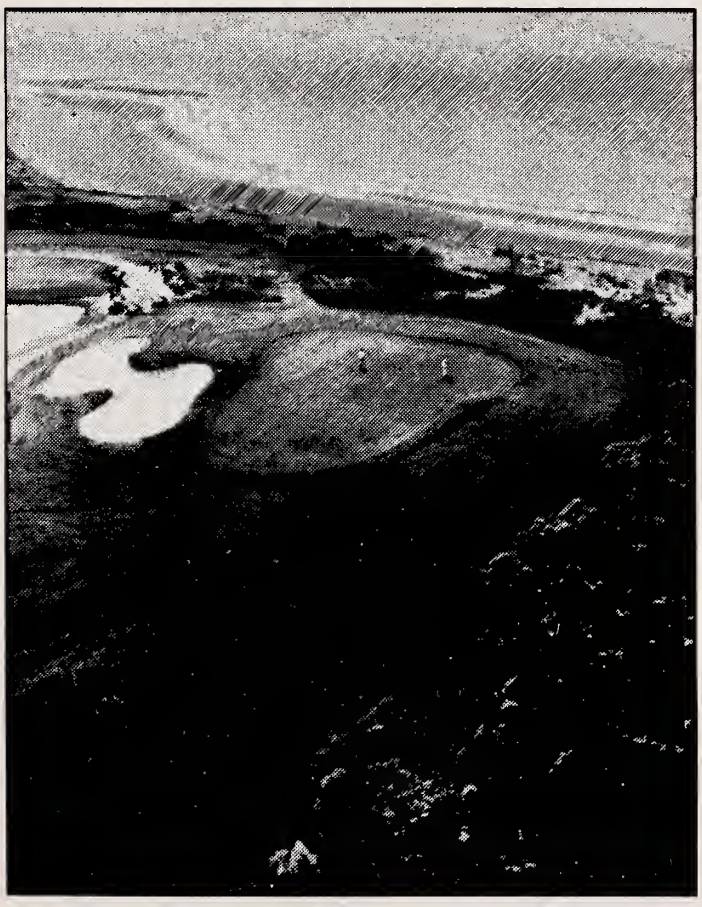
In this review of death certificates and Water Death Investigation Reports, it was not possible to assess the effectiveness of any of the various injury prevention programs in the State of Georgia. However, use of these data sets permitted an epidemiologic assessment of fatalities due to drowning. Promotion of educational safety programs and stringent enforcement of laws pertaining to operating boats while under the influence of alcohol should be considered in preventing future fatalities from drowning.

Acknowledgements

The authors wish to acknowledge the assistance of Michael R. Lavoie, Director, Vital Records Unit, Donna Rogers, Office of Epidemiology, Georgia Department of Human Resources, in obtaining death certificates and the staff of the Law Enforcement Division; Game and Fish Commission, Georgia Department of Natural Resources, in obtaining Water Death Investigation Reports. The authors also thank Robert Tauxe, M.D., M.P.H., Jeffrey J. Sacks, M.D., M.P.H., Thomas W. McKinley, M.P.H., and Ruth Anne Marcus, M.P.H., for editorial assistance.

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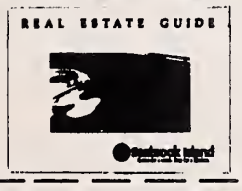
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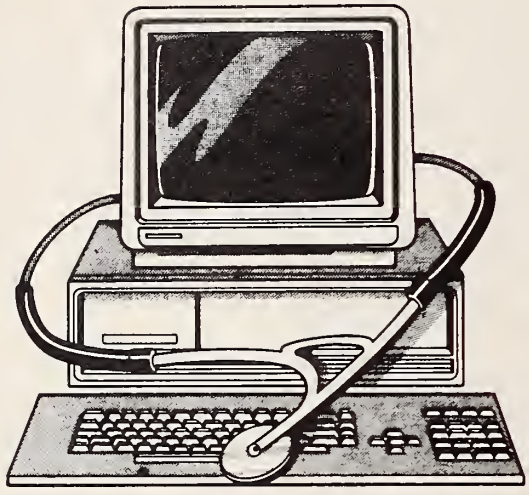
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References:
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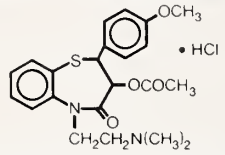
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CLINICAL PHARMACOLOGY

The therapeutic benefits achieved with CARDIZEM are believed to be related to its ability to inhibit the influx of calcium ions during membrane depolarization of cardiac and vascular smooth muscle.

Mechanisms of Action. Although precise mechanisms of its antianginal actions are still being delineated, CARDIZEM is believed to act in the following ways:

1. Angina Due to Coronary Artery Spasm: CARDIZEM has been shown to be a potent dilator of coronary arteries both epicardial and subendocardial. Spontaneous and ergonovine-induced coronary artery spasm are inhibited by CARDIZEM.
2. Exertional Angina: CARDIZEM has been shown to produce increases in exercise tolerance, probably due to its ability to reduce myocardial oxygen demand. This is accomplished via reductions in heart rate and systemic blood pressure at submaximal and maximal exercise work loads.

In animal models, diltiazem interferes with the slow inward (depolarizing) current in excitable tissue. It causes excitation-contraction uncoupling in various myocardial tissues without changes in the configuration of the action potential. Diltiazem produces relaxation of coronary vascular smooth muscle and dilation of both large and small coronary arteries at drug levels which cause little or no negative inotropic effect. The resultant increases in coronary blood flow (epicardial and subendocardial) occur in ischemic and nonischemic models and are accompanied by dose-dependent decreases in systemic blood pressure and decreases in peripheral resistance.

Hemodynamic and Electrophysiologic Effects. Like other calcium antagonists, diltiazem decreases sinoatrial and atrioventricular conduction in isolated tissues and has a negative inotropic effect in isolated preparations. In the intact animal, prolongation of the AH interval can be seen at higher doses.

In man, diltiazem prevents spontaneous and ergonovine-provoked coronary artery spasm. It causes a decrease in peripheral vascular resistance and a modest fall in blood pressure and, in exercise tolerance studies in patients with ischemic heart disease, reduces the heart rate-blood pressure product for any given work load. Studies to date, primarily in patients with good ventricular function, have not revealed evidence of a negative inotropic effect; cardiac output, ejection fraction, and left ventricular end diastolic pressure have not been affected. There are as yet few data on the interaction of diltiazem and beta-blockers. Resting heart rate is usually unchanged or slightly reduced by diltiazem.

Intravenous diltiazem in doses of 2D mg prolongs AH conduction time and AV node functional and effective refractory periods approximately 20%. In a study involving single oral doses of 3DD mg of CARDIZEM in six normal volunteers, the average maximum PR prolongation was 14% with no instances of greater than first-degree AV block. Diltiazem-associated prolongation of the AH interval is not more pronounced in patients with first-degree heart block. In patients with sick sinus syndrome, diltiazem significantly prolongs sinus cycle length (up to 5D% in some cases).

Chronic oral administration of CARDIZEM in doses of up to 24D mg/day has resulted in small increases in PR interval, but has not usually produced abnormal prolongation. There were, however, three instances of second-degree AV block and one instance of third-degree AV block in a group of 959 chronically treated patients.

Pharmacokinetics and Metabolism. Diltiazem is absorbed from the tablet formulation to about 80% of a reference capsule and is subject to an extensive first-pass effect, giving an absolute bioavailability (compared to intravenous dosing) of about 40%. CARDIZEM undergoes extensive hepatic metabolism in which 2% to 4% of the unchanged drug appears in the urine. In vitro binding studies show CARDIZEM is 7D% to 8D% bound to plasma proteins. Competitive ligand binding studies have also shown CARDIZEM binding is not altered by therapeutic concentrations of digoxin, hydrochlorothiazide, phenylbutazone, propranolol, salicylic acid, or warfarin. Single oral doses of 3D to 120 mg of CARDIZEM result in detectable plasma levels within 3D to 6D minutes and peak plasma levels two to three hours after drug administration. The plasma elimination half-life following single or multiple drug administration is approximately 3.5 hours. Desacetyl diltiazem is also present in the plasma at levels of 1D% to 20% of the parent drug and is 25% to 5D% as potent a coronary vasodilator as diltiazem. Therapeutic blood levels of CARDIZEM appear to be in the range of 5D to 2DD ng/ml. There is a departure from dose-linearity when single doses above 6D mg are given; a 120-mg dose gave blood levels three times that of the 6D-mg dose. There is no information about the effect of renal or hepatic impairment on excretion or metabolism of diltiazem.

INDICATIONS AND USAGE

1. **Angina Pectoris Due to Coronary Artery Spasm.** CARDIZEM is indicated in the treatment of angina pectoris due to coronary artery spasm. CARDIZEM has been shown effective in the treatment of spontaneous coronary artery spasm presenting as Prinzmetal's variant angina (resting angina with ST-segment elevation occurring during attacks).
2. **Chronic Stable Angina (Classic Effort-Associated Angina).** CARDIZEM is indicated in the management of chronic stable angina. CARDIZEM has been effective in controlled trials in reducing angina frequency and increasing exercise tolerance.

There are no controlled studies of the effectiveness of the concomitant use of diltiazem and beta-blockers or of the safety of this combination in patients with impaired ventricular function or conduction abnormalities.

CONTRAINDICATIONS

CARDIZEM is contraindicated in (1) patients with sick sinus syndrome except in the presence of a functioning ventricular pacemaker, (2) patients with second- or third-degree AV block except in the presence of a functioning ventricular pacemaker, and (3) patients with hypotension (less than 9D mm Hg systolic).

WARNINGS

1. **Cardiac Conduction.** CARDIZEM prolongs AV node refractory periods without significantly prolonging sinus node recovery time, except in patients with sick sinus syndrome. This effect may rarely result in abnormally slow heart rates (particularly in patients with sick sinus syndrome) or second- or third-degree AV block (six of 1243 patients for 0.48%). Concomitant use of diltiazem with beta-blockers or digitalis may result in additive effects on cardiac conduction. A patient with Prinzmetal's angina developed periods of asystole (2 to 5 seconds) after a single dose of 6D mg of diltiazem.
2. **Congestive Heart Failure.** Although diltiazem has a negative inotropic effect in isolated animal tissue preparations, hemodynamic studies in humans with normal ventricular function have not shown a reduction in cardiac index nor consistent negative effects on contractility (dp/dt). Experience with the use of CARDIZEM alone or in combination with beta-blockers in patients with impaired ventricular function is very limited. Caution should be exercised when using the drug in such patients.
3. **Hypotension.** Decreases in blood pressure associated with CARDIZEM therapy may occasionally result in symptomatic hypotension.
4. **Acute Hepatic Injury.** In rare instances, patients receiving CARDIZEM have exhibited reversible acute hepatic injury as evidenced by moderate to extreme elevations of liver enzymes. (See PRECAUTIONS and ADVERSE REACTIONS.)

PRECAUTIONS

General. CARDIZEM (diltiazem hydrochloride) is extensively metabolized by the liver and excreted by the kidneys and in bile. As with any new drug given over prolonged periods, laboratory parameters should be monitored at regular intervals. The drug should be used with caution in patients with impaired renal or hepatic function. In subacute and chronic dog and rat studies designed to produce toxicity, high doses of diltiazem were associated with hepatic damage. In special subacute hepatic studies, oral doses of 125 mg/kg and higher in rats were associated with histological changes in the liver which were reversible when the drug was discontinued. In dogs, doses of 20 mg/kg were also associated with hepatic changes; however, these changes were reversible with continued dosing.

Drug Interaction. Pharmacologic studies indicate that there may be additive effects in prolonging AV conduction when using beta-blockers or digitalis concomitantly with CARDIZEM. (See WARNINGS).

Controlled and uncontrolled domestic studies suggest that concomitant use of CARDIZEM and beta-blockers or digitalis is usually well tolerated. Available data are not sufficient, however, to predict the effects of concomitant treatment, particularly in patients with left ventricular dysfunction or cardiac conduction abnormalities. In healthy volunteers, diltiazem has been shown to increase serum digoxin levels up to 20%.

Carcinogenesis, Mutagenesis, Impairment of Fertility. A 24-month study in rats and a 21-month study in mice showed no evidence of carcinogenicity. There was also no mutagenic response in in vitro bacterial tests. No intrinsic effect on fertility was observed in rats.

Pregnancy. Category C. Reproduction studies have been conducted in mice, rats, and rabbits. Administration of doses ranging from five to ten times greater (on a mg/kg basis) than the daily recommended therapeutic dose has resulted in embryo and fetal lethality. These doses, in some studies, have been reported to cause skeletal abnormalities. In the perinatal/postnatal studies, there was some reduction in early individual pup weights and survival rates. There was an increased incidence of stillbirths at doses of 2D times the human dose or greater.

There are no well-controlled studies in pregnant women; therefore, use CARDIZEM in pregnant women only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers. It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, exercise caution when CARDIZEM is administered to a nursing woman if the drug's benefits are thought to outweigh its potential risks in this situation.

Pediatric Use. Safety and effectiveness in children have not been established.

ADVERSE REACTIONS

Serious adverse reactions have been rare in studies carried out to date, but it should be recognized that patients with impaired ventricular function and cardiac conduction abnormalities have usually been excluded.

In domestic placebo-controlled trials, the incidence of adverse reactions reported during CARDIZEM therapy was not greater than that reported during placebo therapy.

The following represent occurrences observed in clinical studies which can be at least reasonably associated with the pharmacology of calcium influx inhibition. In many cases, the relationship to CARDIZEM has not been established. The most common occurrences, as well as their frequency of presentation, are: edema (2.4%), headache (2.1%), nausea (1.9%), dizziness (1.5%), rash (1.3%), asthenia (1.2%), AV block (1.1%). In addition, the following events were reported infrequently (less than 1%) with the order of presentation corresponding to the relative frequency of occurrence.

Cardiovascular:	Flushing, arrhythmia, hypotension, bradycardia, palpitations, congestive heart failure, syncope.
Nervous System:	Paresthesia, nervousness, somnolence, tremor, insomnia, hallucinations, and amnesia.
Gastrointestinal:	Constipation, dyspepsia, diarrhea, vomiting, mild elevations of alkaline phosphatase, SGDT, SGPT, and LDH.
Dermatologic:	Pruritus, petechiae, urticaria, photosensitivity.
Other:	Polyuria, nocturia.

The following additional experiences have been noted:

A patient with Prinzmetal's angina experiencing episodes of vasospastic angina developed periods of transient asymptomatic asystole approximately five hours after receiving a single 60-mg dose of CARDIZEM.

The following postmarketing events have been reported infrequently in patients receiving CARDIZEM: erythema multiforme; leukopenia; and extreme elevations of alkaline phosphatase, SGOT, SGPT, LDH, and CPK. However, a definitive cause and effect between these events and CARDIZEM therapy is yet to be established.

OVERDOSAGE OR EXAGGERATED RESPONSE

Overdosage experience with oral diltiazem has been limited. Single oral doses of 3DD mg of CARDIZEM have been well tolerated by healthy volunteers. In the event of overdosage or exaggerated response, appropriate supportive measures should be employed in addition to gastric lavage. The following measures may be considered:

Bradycardia	Administer atropine (0.6D to 1.0 mg). If there is no response to vagal blockade, administer isoproterenol cautiously.
High-Degree AV Block	Treat as for bradycardia above. Fixed high-degree AV block should be treated with cardiac pacing.
Cardiac Failure	Administer inotropic agents (isoproterenol, dopamine, or dobutamine) and diuretics.
Hypotension	Vasopressors (eg, dopamine or levarterenol bitartrate).

Actual treatment and dosage should depend on the severity of the clinical situation and the judgment and experience of the treating physician.

The oral/LD_{50}'s in mice and rats range from 415 to 740 mg/kg and from 560 to 810 mg/kg, respectively. The intravenous LD_{50}'s in these species were 6D and 38 mg/kg, respectively. The oral LD_{50} in dogs is considered to be in excess of 50 mg/kg, while lethality was seen in monkeys at 36D mg/kg. The toxic dose in man is not known, but blood levels in excess of 800 ng/ml have not been associated with toxicity.

DOSAGE AND ADMINISTRATION

Exertional Angina Pectoris Due to Atherosclerotic Coronary Artery Disease or Angina Pectoris at Rest Due to Coronary Artery Spasm. Dosage must be adjusted to each patient's needs. Starting with 3D mg four times daily, before meals and at bedtime, dosage should be increased gradually (given in divided doses three or four times daily) at one- to two-day intervals until optimum response is obtained. Although individual patients may respond to any dosage level, the average optimum dosage range appears to be 180 to 240 mg/day. There are no available data concerning dosage requirements in patients with impaired renal or hepatic function. If the drug must be used in such patients, titration should be carried out with particular caution.

Concomitant Use With Other Antianginal Agents:

1. **Sublingual NTG** may be taken as required to abort acute anginal attacks during CARDIZEM therapy.
2. **Prophylactic Nitrate Therapy**—CARDIZEM may be safely coadministered with short- and long-acting nitrates, but there have been no controlled studies to evaluate the antianginal effectiveness of this combination.
3. **Beta-blockers.** (See WARNINGS and PRECAUTIONS.)

HOW SUPPLIED

Cardizem 30-mg tablets are supplied in bottles of 100 (NDC 0D88-1771-47) and in Unit Dose Identification Paks of 100 (NDC 0088-1771-49). Each green tablet is engraved with MARIDN on one side and 1771 engraved on the other. CARDIZEM 60-mg scored tablets are supplied in bottles of 100 (NDC 0088-1772-47) and in Unit Dose Identification Paks of 1DD (NDC 0088-1772-49). Each yellow tablet is engraved with MARIDN on one side and 1772 on the other.

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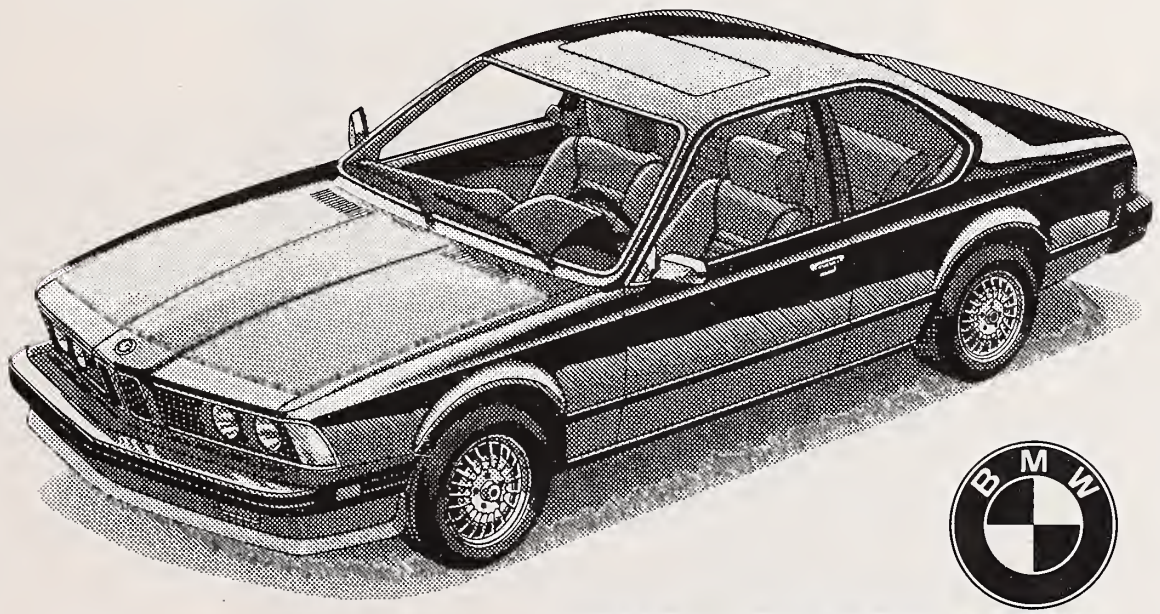
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RUPTURED INTRACRANIAL ANEURYSMS

JAMES H. WOOD, M.D.

A discussion of medical management and surgical options.

Abstract

Although surgery is the treatment of choice and affords a good outcome for most surviving patients with ruptured intracranial aneurysms, surgical candidacy depends upon appropriate and timely medical assessment and management. Rebleeding and vasospasm in the perioperative period accounts for the major morbidity and mortality affecting patient outcome. These complications may be minimized by the prompt initiation of aneurysm protocols which include early surgery for patients without altered consciousness or neurologic deficit, use of antifibrinolytic agents to impede perianeurysmal clot degradation, seizure prophylaxis and colloid-induced augmentation of cerebral perfusion. Suitability of direct clipping, reinforcement by wrapping, trapping with distal cerebral arterial bypass, thrombosis by wire insertion or intraluminal pressure reduction by carotid ligation depends upon aneurysm location, size, configuration, and blood supply.

Introduction

With the advent of delicate surgical techniques afforded by the operating microscope and much improved neuroanesthesia, the morbidity and mortality of the surgical treatment of aneurysmal subarachnoid hemorrhage (SAH) has been greatly reduced.[1] Accordingly, surgical intervention is currently the treatment of choice for most surviving patients with ruptured intracranial aneurysms.

The purpose of this communication is to discuss the medical management and surgical options of patients with ruptured intracranial aneurysms to aid physicians in early patient care and selection for referral to a neurosurgeon. Detailed reviews of the diagnosis of SAH and the management of intracranial arteriovenous malformations (AVMs) have been previously presented.[2, 3]

Background

Generally, 50% of patients with aneurysmal SAH die before arriving at the hospital, and another 25% die prior to surgery. Thus, only 25% of patients with ruptured intracranial aneurysms are potential surgical candidates.[4] The risk of rebleeding is high during the initial days following the ictus and progressively decreases over the subsequent 5 weeks (Figure 1). The mortality for rebleeding is 67-83% during the first 6 months.[5] Untreated survivors of the first 6 months have a 3.7% per year cumulative rebleed rate and a mortality from the recurrent hemorrhage of 67%.[5]

Contrarily, the risk of rupture of intact aneurysms found incidentally in patients without SAH who have undergone angiography is approximately 1% per year.[6]

Clinical Presentation

Signs and symptoms of ruptured intracranial aneurysms consist of meningeal irritation from SAH, direct pressure of the aneurysm, cerebral edema, hydrocephalus, focal cerebral signs from vasospasm, hematoma or thrombosis, seizures, retinal hemorrhages, and hyponatremia due to the syndrome of inappropriate antidiuretic hormone secretion (SIADH). Although the signs and symptoms listed in Table 1 are useful in the clinical localization of intracranial aneurysms, most patients with symptomatic aneurysms present with SAH and symptoms as previously outlined.[3]

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Since surgical morbidity and mortality is related to the clinical status of the aneurysm patient at the time of surgery, patients with SAH are graded according to the classification of Hunt and Hess.[7] Generally, patients having Grade I or Grade II classifications are assigned to the "good grade" category, whereas those having Grades III, IV, and V are given "poor grade" status. Grade 0 class has recently been used to describe patients with incidental unruptured aneurysms. After initial classification upon admission, patients should be repetitively examined for a change in clinical grade (Table 2).

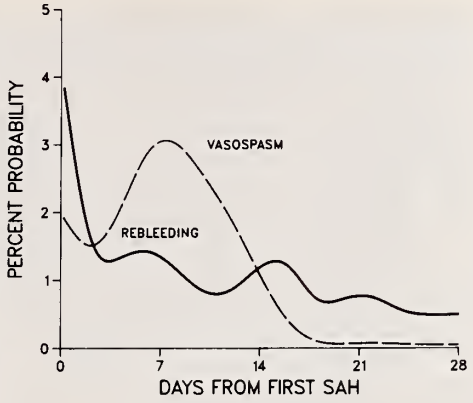


Figure 1 — Time course of percent probability of rebleeding and vasospasm following aneurysmal subarachnoid hemorrhage (SAH). From Kassell and Boarini,[38] with permission.

Diagnostic Evaluation

Computed Tomography (CT)

In addition to the documentation of SAH,[3] CT is useful in localizing the site of hemorrhage and is especially beneficial in cases of multiple aneurysms in identifying which aneurysm has bled. This lateralization of the bleeding site enables angiography to first study the vessels most likely responsible for the bleed. The accuracy of the distribution of cisternal blood in predicting the site of the ruptured aneurysm varies from 92% for the anterior cerebral artery to 70% for the middle cerebral artery and 47% for the internal carotid artery.[8] Intraventricular hemorrhage which has been associated with anterior communicating artery aneurysms can be seen with a rupture of aneurysms at any of these sites.[9]

With ruptured intracranial vertebral artery aneurysms, subarachnoid blood is seen in the infratentorial cisterns and the fourth ventricle. Basilar tip aneurysms produce maximal SAH within the tentorial cisterns but may present with hematoma in the interpeduncular cistern, hypothalamus, or isolated within the third ventricle.[9]

Contrast is administered intravenously and enables visualization of the aneurysm in about 30% of cases[10] (Figure 2). Such aneurysm detection is compromised by the density of the SAH surrounding the aneurysm and small aneurysm size.

Important correlations have been reported between the extent of SAH as visualized on CT and both the clinical grade and propensity to develop cerebral vasospasm.[11, 12] Among patients studied by CT within 4 days of the ictus, the absence of subarachnoid blood or the presence of only minimal

Table 1. — Signs and Symptoms of Aneurysms According to Site of Origin

Origin of Aneurysm	*Structure Involved*	*Signs and Symptoms*
Internal carotid, cavernous portion	Compression of cranial nerves 3, 4, & 6; compression of ophthalmic division of cranial nerve 5; compression of pituitary; rupture into cavernous sinus producing an AV fistula	Mydriasis, diplopia, ptosis, trigeminal neuralgia, atypical facial pain, hypopituitarism, noise in the head
Internal carotid, supraclinoid portion	Compression of optic nerve, compression of optic chiasm, compression of cranial nerve 3	Visual failure, optic atrophy, visual field defects, mydriasis, diplopia, ptosis
Ophthalmic artery	Compression of optic nerve, compression of pituitary	Visual failure, optic atrophy, hypopituitarism
Middle cerebral artery	Irritation of the cortex	Usually causes few signs and symptoms before rupture, partial seizures
Anterior cerebral artery	Compression of optic chiasm, compression of olfactory tract	Visual field defects, unilateral anosmia
Posterior communicating artery	Compression of cranial nerve 3, compression of cranial nerve 6	Mydriasis, diplopia, ptosis, diplopia
Posterior cerebral artery	Compression of the midbrain	Usually causes a few signs and symptoms before rupture, hydrocephalus, stupor, akinetic mutism
Basilar artery	Compression of cranial nerve 5, compression of cranial nerve 7, compression of mid-brain	Trigeminal neuralgia, atypical facial pain, facial paralysis, hydrocephalus
Vertebral artery	Compression of cranial nerves 9 & 10, compression of brainstem	Paralysis of the palate, pharynx, dysphonia, dysphagia, vertigo, ataxia, vomiting

From Gilroy and Holliday,[37] with permission.

amounts was associated with a good clinical status in 89% of cases and an absence of or the presence of only minimal vasospasm in 71% of cases. The presence of moderate to severe SAH on CT was associated with poor clinical status in 50% of patients and severe vasospasm in 70% of patients. Severe angiographic spasm has been found to be present in 95% of aneurysm patients who have CT evidence of regions of decreased density suggesting infarction. These lucencies were also associated with functional neurologic deficits in 85% of cases. Therefore, the amount of blood visualized on CT correlates with the development of vasospasm, ischemic infarction, and neurologic deficits.

Within the first 2 weeks after aneurysmal rupture, approximately 12% of patients have significant ventricular enlargement.[13] In about half of these patients, delayed symptomatic hydrocephalus develops and requires shunting. Thus, CT is useful not only in diagnosing SAH, but also in predicting the clinical course and outcome after aneurysm rupture.

Angiography

Cerebral angiography should be performed as soon as possible to confirm the diagnosis of intracranial aneurysm as the cause for the SAH so that early institution of the preoperative aneurysm protocol can minimize management morbidity from rebleeding, seizures, or vasospasm. Four-vessel angiography is required to assess the entire intracranial circulation, since approximately 20% of patients presenting with SAH have more than one aneurysm (Figure 3). In addition to anteroposterior and lateral views, demonstration of the aneurysm neck may require oblique views. Submental views are sometimes useful for internal carotid artery or basilar bifurcation aneurysms.[14]

Current techniques of employing magnification and subtraction cerebral angiography have been found to be 93% accurate in detecting aneurysms.[14] The false-negative examinations were secondary to nonfilling of the aneurysm secondary to cerebral vasospasm, observer error, failure to identify the ruptured aneurysm when another aneurysm was found, or inadequate examination.

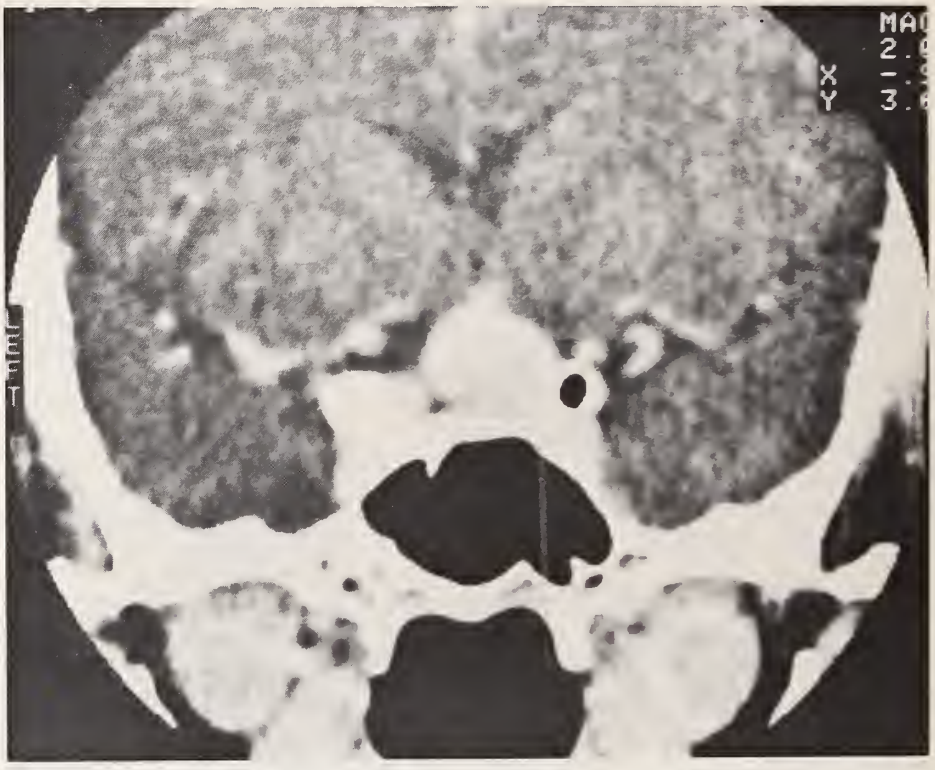


Figure 2 — Coronal cranial computed tomograph (CT) after intravenous contrast injection in patient with optic atrophy, Marcus-Gunn pupil, and visual loss. Note enhancement of giant internal carotid artery aneurysm which is projecting medially between clinoid processes. Right clinoid process is pneumatized.

Table 2 — Classification of Patients with Intracranial Aneurysms According to Surgical Risk

*Category**	*Criteria*
Grade I	Asymptomatic or minimal headache and slight nuchal rigidity.
Grade II	Moderate to severe headaches, nuchal rigidity, no neurological deficit other than cranial nerve palsy.
Grade III	Drowsiness, confusion, or mild focal deficit.
Grade IV	Stupor, moderate to severe hemiparesis, possibly early decerebrate rigidity and vegetative disturbances.
Grade V	Deep coma, decerebrate rigidity, moribund appearance.

* Serious systemic disease such as hypertension, diabetes, severe arteriosclerosis, chronic pulmonary disease, and severe vasospasm seen on arteriography, result in placement of the patient in the next less favorable category.

From Hunt and Hess,[7] with permission.

Angiographically, the three most common sites of intracranial aneurysms are at the posterior communicating artery origin (Figure 3), at the anterior communicating artery, and at the bifurcation of the middle cerebral artery. Approximately 80% of all aneurysms occur in the carotid circulation, while 20% arise in the vertebrobasilar system. Other locations where aneurysms occur frequently include the origin of the ophthalmic artery (Figure 3), peripheral bifurcations of the anterior and middle cerebral arteries, the origin of the posterior inferior cerebellar artery, the junction of the two vertebral arteries, and the bifurcation of the basilar artery (Figure 4). Aneurysms

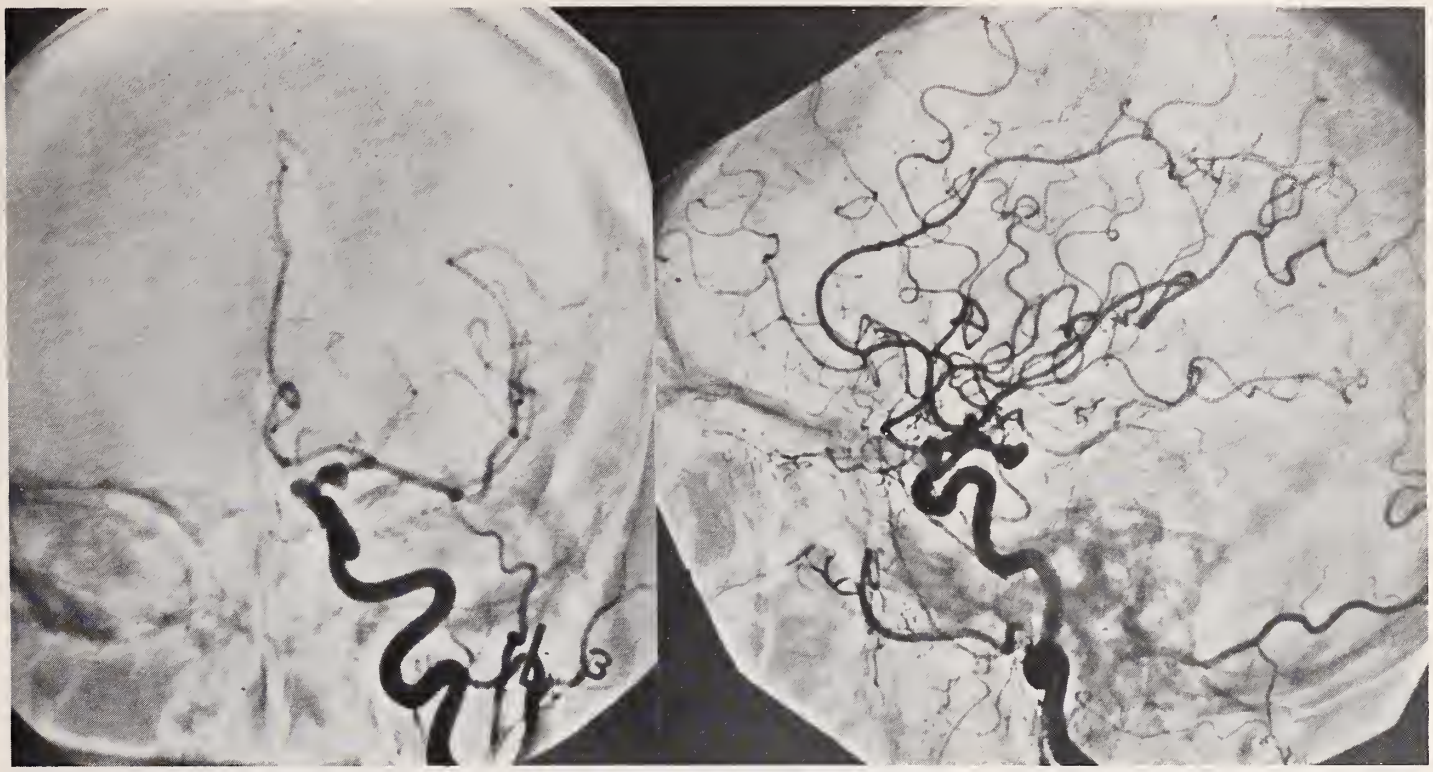


*Figure 3 — **Left:** Anteroposterior view of subtracted left carotid angiogram demonstrating two aneurysms in patient presenting with subarachnoid hemorrhage and complete left third nerve palsy. **Right:** Subtracted lateral angiographic projection of same patient better demonstrating incidental left ophthalmic and ruptured left internal carotid-posterior communicating artery aneurysms. Note that rupture of internal carotid-posterior communicating artery aneurysm is indicated by its larger size and the presence of "Murphy's teat." This suspected site of rupture was confined by author during uneventful clipping of both aneurysms.*

situated in close proximity to the circle of Willis are usually congenital in origin. More peripherally placed aneurysms may be congenital, but mycotic and posttraumatic lesions occur on peripheral branches of intracranial arteries, particularly the middle cerebral artery.

In the presence of multiple aneurysms, the following angiographic criteria may be applied to define which aneurysm is responsible for the SAH: 1) extravasation of contrast from the aneurysm; 2) the larger aneurysm; 3) presence of focal protruberance of aneurysm dome ("Murphy's teat") (Figure 3); 4) mass effect suggesting hematoma surrounding aneurysm; 5) spasm of vessels surrounding aneurysm (least reliable).[14]

Preoperative Management

Following the diagnosis of ruptured intracranial aneurysm, the author recommends immediately placing the patient in an aneurysm protocol (Table 3) aimed at (1) minimizing the risk of clinical deterioration secondary to rebleeding of the aneurysm and the consequences of vasospasm and (2) allowing time for patients whose neurologic status is grade III, IV, or V to improve.

Rebleeding and vasospasm in the perioperative period accounts for the major morbidity and mortality affecting patient outcome.

Initiation of antifibrinolytic therapy is recommended immediately after making the diagnosis of ruptured aneurysm by the continuous intravenous administration of episilon-aminocaproic acid (Amicar) in a dosage of 2 grams/hour. This agent impedes but does not eliminate the breakdown of the clot that has formed at the leak site of the aneurysm and has been shown to decrease the incidence of rebleeding from 22% to 10% during the first 2 weeks after the ictus.[15] Unfortunately, this antifibrinolytic therapy is minimally effective after 2-3 weeks; thus, delayed surgery is usually performed within 3 weeks of aneurysm rupture. Patients kept in the supine position have lowered intravascular blood volume which can depress cardiac output and reduce cerebral blood flow; therefore, efforts are made to normalize the intravascular volume with intravenous colloid solutions.[16] The author administers 5% human serum albumin intravenously to maintain the central venous pressure between 8 and 12 cm of water. Unlike whole blood infusions,[17] albumin solutions have been found to reduce blood viscosity and augment cerebral perfusion[18] and are thereby thought to reduce the chances of ischemia associated with

cerebral vasospasm.[19] The use of calcium channel blockers such as nimodopine, is considered experimental and is currently under evaluation.[20] The blood pressure in known hypertensive patients should be reduced to a mean pressure of approximately 120 mm Hg but no lower than 100 mm Hg. Patients without known antecedent hypertension who are hypertensive on admission should be made normotensive.[21] This avoidance of extreme hypertension reduces the risk of recurrent hemorrhage but also allows adequate cerebral perfusion. Cardiac dysrhythmias should be assessed and treated to maintain adequate cardiac output.[22]

Although the author routinely orders dexamethasone (Decadron) in a dosage of 6 mg every 6 hours to reduce the inflammatory response of the subarachnoid blood as well as cerebral edema formation, the efficacy of steroids in SAH has yet to be proven. Cimetadine (Tagamet) is given 300 mg p.o. q.i.d. to decrease gastric acidity and prevent the formation of stress ulcers, especially in patients taking dexamethasone.

If clinical deterioration occurs prior to surgery, the possibility of hyponatremia secondary to SIADH should be assessed. Repeat cranial CT scanning should be used to detect recurrent hemorrhage from the aneurysm or the development of hydrocephalus. Although no treatment is indicated for recurrent SAH unless a surgically-accessible life-threatening intracerebral hematoma is found, patients having hydrocephalus may require CSF diversion. Ventriculostomy connected to external drainage system is more appropriate than ventriculoperitoneal shunting in patients with significant intraventricular hemorrhage. In the absence of rebleeding or hydrocephalus, cerebral arterial spasm may be suggested by demonstrating a significant reduction in cerebral blood flow at the time of the clinical deterioration in comparison with that obtained at admission. Cerebral arterial spasm, when symptomatic, has been resistent to most vasodilatory agents. Although raising of mean arterial blood pressure will increase

Table 3 — Preoperative Intracranial Aneurysms Protocol

Hospitalization
Subdued lighting
Elevation of the head no more than 30 degrees
Patient allowed to turn but not sit up or feed himself
Bowel habits regulated with stool softeners
Maintenance of airway and oxygenation
Seizure prophylaxis with diphenylhydantoin, 100 mg 3 times daily
Adequate fluids, 1500 to 2000 ml per 24 hours (by mouth, nasogastric tube, or intravenously)
1000 calories of nutrition per day
Epsilon-aminocaproic acid, 2 grams per hour by continuous infusion
Condom drainage for men and catheter drainage for women only for incontinence. Otherwise, normal voiding permitted.
Analgesic with acetaminaphen, codeine, or meperidine hydrochloride as necessary
Vital sign and abbreviated neurologic examination qlh
Nausea, vomiting, and singultus may be treated with phenothiazines
Steroids and other anti-edema drugs may be used when indicated
Anti-embolic stockings, passive motion of lower limbs several times daily
Emergency arterial blood gas, blood electrolyte determination, and computed tomography if patient acutely deteriorates
Colloid infusions if symptomatic cerebral arterial spasm develops



Figure 4 — Lateral view of left vertebral angiogram demonstrating ruptured aneurysm at bifurcation of basilar artery. Aneurysm dome projected into interpeduncular cistern and only neck was visualized by author during surgical clipping by right subtemporal approach. Basilar tip is most common aneurysm location in posterior fossa.

cerebral perfusion in regions of ischemia having lost pressure autoregulatory capabilities,[23] most physicians are reluctant to use induced hypertension in patients with unclipped aneurysms for fear of precipitating rebleeding. Currently, most neurosurgeons advocate increasing the intravenous 5% human serum albumin infusions to a rate required to reduce the hematocrit to approximately 33%.[24] This therapy has been associated with neurologic improvement in alert patients with focal cerebral ischemia[25] and has been shown to elevate cerebral blood flow by reducing blood viscosity.[26] The infusion of colloid solutions appears particularly applicable in patients with unclipped aneurysms, since this therapy does not usually raise mean arterial blood pressure.[19, 25]

Surgical Management Options of Aneurysms

Patients with ruptured intracranial aneurysms who are alert and lack neurologic deficit (Grades I and II), especially those with considerable amounts of subarachnoid blood visualized on CT who would be at higher risk of developing delayed symptomatic cerebral vasospasm, are considered by the author to be candidates for early surgery within the first 3 days following the ictus. Importantly, such early intervention in good grade patients reduces overall morbidity by minimizing the patient's exposure to the risk of rebleeding and also allowing the intraoperative removal of subarachnoid clot prior to the development of vasospasm (Figure 1).[27] Surgery is deferred for patients in the Grade III category for 2-3 weeks, giving time for these patients to improve to at least a Grade II clinical status.[7, 16] Surgery is not indicated for patients in the Grade IV and Grade V categories. If significant vasospasm is demonstrated angiographically on the day prior to intended surgery, the operation is further delayed until this spasm is shown to be clearing,[16] since surgical manipulation may augment this vasoconstriction.

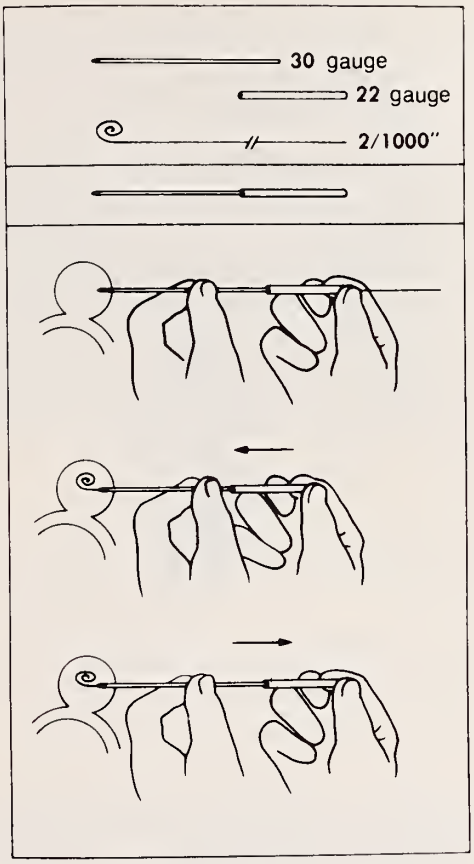


Figure 5 — Diagram of insertion of 30-gauge needle into sac of giant aneurysm and pumping action of segment of 22-gauge tubing to feed metallic wire into aneurysm. This maneuver prevents kinking of thrombogenic wire during insertion. From Hosobuchi,[30] with permission.

Surgical candidacy and operative procedure depend upon timely medical management and appropriate patient assessment.

The pterional or frontolateral craniotomy is used to approach aneurysms located in the anterior circulation and sometimes for basilar bifurcation aneurysms. Aneurysms in the region of the basilar bifurcation, including those arising from the superior cerebellar artery are also exposed by an anterior subtemporal approach. The reader is referred to recent textbooks for more detailed descriptions of the surgical exposures of specific aneurysms.[28, 29] Documentation of complete aneurysm obliteration can be obtained by opening the aneurysm dome distal to the clip or by postoperative angiography.

Additional intracranial options for the treatment of broad-based or giant aneurysms include wrapping or coating of the fundus or trapping procedures. Proximal and distal ligation of the artery on which the aneurysm is located obliterates the aneurysm. "Trapping procedures" have become more popular since the advent of cerebral arterial bypass surgery. Giant aneurysms not amenable to clipping or entrapment are obliterated by the intraoperative insertion of stainless steel or beryllium-copper wire which promotes intramural thrombosis (Figure 5).[30]

Another option in the operative treatment of broad-based or giant ophthalmic or internal carotid artery aneurysms and those anterior communicating artery aneurysms associated with unilateral anterior intracranial circulation secondary to the presence of hypoplasia of the proximal anterior cerebral artery (Figure 2) is extracranial carotid artery ligation (Figure 6).[31] The overall complication rate for internal carotid artery ligation of 22% is approximately twice that of 11% reported for common carotid artery ligation.[32] The overall mortality, however, appears to be less with internal carotid artery ligation than with common carotid artery ligation, probably secondary to a greater pressure drop with internal carotid artery ligation and thus a lower aneurysmal rebleed rate. A recent study has found a 7.5% incidence of late rebleeding for a period of 10 years following carotid artery ligation.[33]

The Matas test, which involves a trial temporary occlusion of the carotid artery by compressing the artery, has proved to be an unreliable predictor of occlusion tolerance, probably because ischemic problems may develop at an average of 27 hours after carotid ligation. Currently, the combination of measurements of cerebral

blood flow and distal internal carotid artery pressure following temporary common carotid occlusion appears to be the best predictor of which patients can tolerate acute carotid artery occlusion[34] (Table 4). The author employs a Crutchfield clamp to gradually occlude the common carotid artery (Figure 6); however, in certain instances, this clamp is used to gradually occlude the internal carotid artery following concomitant cerebral arterial bypass. Gradual carotid occlusion permits a more controlled reduction in cerebral blood flow and the opportunity of reopening of the clamp should the patient develop ischemic neurologic deficits. A late occurrence rate for transient ischemic attacks and stroke of 12.5% and 7.5%, respectively, has been reported in patients undergoing carotid artery ligation.[33] Whether or not the addition of cerebral arterial bypass reduces this late morbidity requires further study.

Alternatively to direct clipping of anterior communicating artery aneurysms, clip occlusion of the proximal anterior communicating artery may be performed when this artery is shown by cerebral angiograpy to be the main supply (Figure 7) of the aneurysm.[35, 36] The "Logue procedure" results in thrombosis of the aneurysm in 23% of patients, reduction in aneurysm size in 33%, and no further enlargement in37% of cases.[36] The reported rate of recurrent hemorrhage among survivors of the operation is about 3% over 9 years.[36]

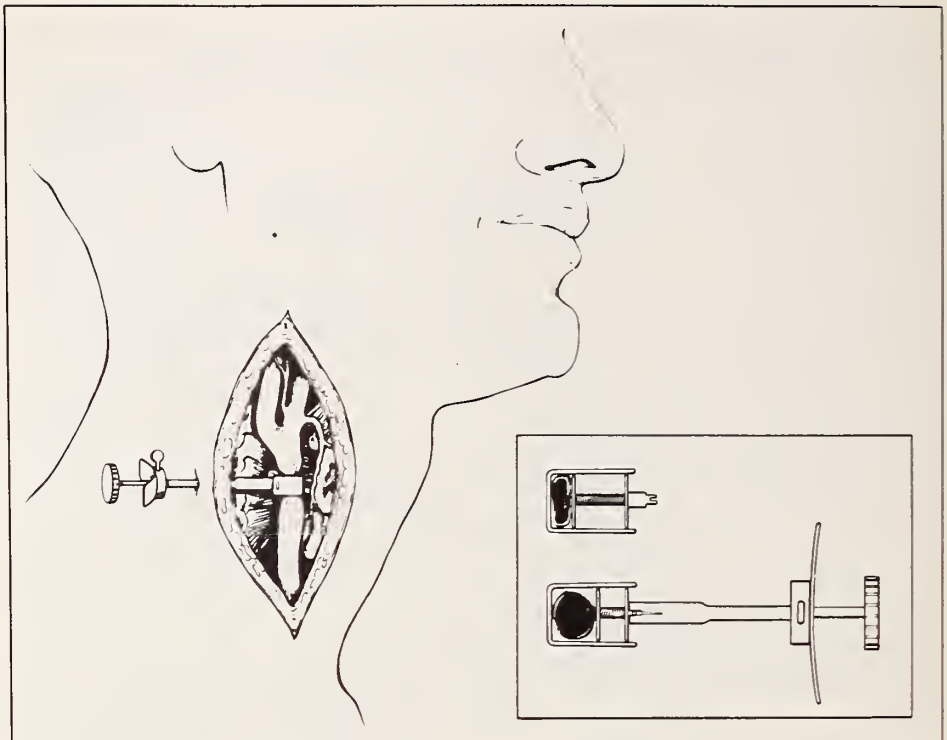


Figure 6 — Diagram of Crutchfield clamping of cervical common carotid artery. Handle of clamp is brought out of operative wound through small stab incisions. Clamp is partially closed intraoperatively so that distal pressure will decrease with further gradual closure over several days. ***Insert:*** *Shaft of handle is detached and removed when carotid artery is closed if patient is neurologically stable. From Tindall and Fleischer,[38] with permission.*

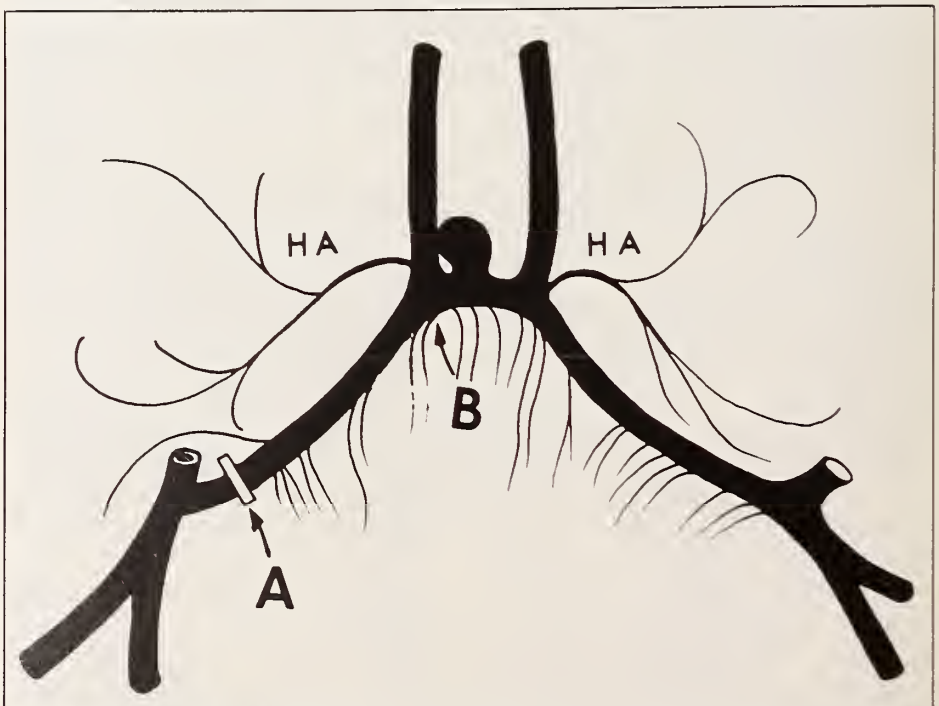


Figure 7 — Diagram of clip occlusion of proximal anterior cerebral artery in treatment of certain anterior communicating artery aneurysms (Logue procedure). ***A:*** *Optimal location for clip ligation which avoids dissection of perforating arteries to hypothalamus.* ***B:*** *Location of clip whose application may compromise perforating arteries.* ***HA:*** *Recurrent artery of Heubner. From Scott,[42] with permission.*

Postoperative Management of Aneurysms

Should the patient deteriorate during the postoperative period, the possibility of hyponatremia secondary to SIADH or hypoxia would be excluded by assessment of the blood electrolytes and arterial blood gases, respectively. An emergency CT scan will exclude treatable disorders such as hydrocephalus, hematoma in the operative site, or brain edema secondary to retractor pressure during induced-hypotension. If the CT scan is nondiagnostic, further deterioration

Table 4 — Criteria for Completion of Carotid Ligation

1. **Ligation is safe if CBF is ≥ 40 ml/min/100 gm during carotid clamping regardless of change from control flow.**
2. **Ligation is safe if CBF during clamping lies in range 20-40 ml/min/100 gm, provided that the reduction from control flow is ≤ 25%.**
3. **Ligation is also safe if CBF range 20-40 ml/min/100 gm with up to 35% reduction in flow from control, provided that internal carotid artery pressure is ≥ 60 mm Hg in normotensive patients.**
4. **Ligation is always unsafe if CBF during clamping is < 20 ml/min/100 gm regardless of change from control flow.**

From Miller, *et al*,[34] with permission.

of cerebral blood flow might indicate the presence of cerebral ischemia secondary to vasospasm. Because the aneurysm has been clipped, induced hypertension as well as blood viscosity reduction can be used to elevate cerebral blood flow.[21]

Following aneurysm obliteration, antifibrinolytic therapy is discontinued. Steroid medication dosages are tapered over several days and discontinued. Prophylactic anticonvulsant therapy is continued for approximately 6 weeks following surgery, tapered and discontinued if no postoperative seizures have occurred.

Summary

Although the advent of the operating microscope and improved neuroanesthesia has reduced the operative mortality and morbidity to make surgery the treatment of choice for ruptured intracranial aneurysms, surgical candidacy and operative procedure depend upon timely medical management and appropriate patient assessment, respectively. The successful avoidance of rebleeding and vasospasm during the perioperative period are the management goals aimed at improving the outcome of those patients surviving the initial ictus. Protocols based upon currently available expertise which minimize these major complications include early surgery for patients without altered consciousness or neurologic deficit, use of antifibrinolytic agents to impede perianeurysmal clot degradation, seizure prophylaxis, and colloid-induced augmentation of cerebral perfusion.

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REFRACTIVE SURGERY OF THE EYE

J. TREVOR WOODHAMS, M.D.

An overview for the medical community.

The current status and developments in the near future are discussed as well as a brief review of the anatomical anomalies of the eye that make glasses necessary in the first place.

The current status and developments in the near future are discussed as well as a brief review of the anatomical anomalies of the eye that make glasses necessary in the first place.

By the turn of the century, glasses may well be an optional prosthetic device. Several new medical procedures, at least one with a track record of over 100,000 cases, are in varying stages of clinical development and promise to fulfill the goal of providing clear, unaided vision to those dependent upon glasses and/or contact lenses for correction of near and far-sightedness as well as astigmatism. The first of these procedures, radial keratotomy, was declared to be "safe, effective, and stable" by a multiple-university, federally funded study. This was PERK or the Prospective Evaluation of Radial Keratotomy, under the direction of Dr. George O. Waring at Emory University.[1] Presently in a state of evolution, many ophthalmologists believe that refractive surgery of the eye will develop into a new subspecialty of ophthalmology. Indeed, the relatively new International Society of Refractive Keratoplasty has just begun to publish its own bi-monthly journal.

The purpose of this article is to inform the larger medical community of the recent history and developments in refractive surgery. The current status and developments in the immediate-to-near future are discussed as well as a brief review of the anatomical anomalies of the eye that make glasses necessary in the first place.

Why We Need Glasses

The eye works in a manner similar to a camera in order to allow the brain to "see." Light passes through the avascular cornea (about 0.5 mm thick). The iris functions as a light-diaphragm to adjust to various levels of brightness. The lens of the eye helps focus the image onto the light-sensitive neural tissue called the retina which lines the back wall of the globe itself and in turn conveys the image to the brain for interpretation. Unlike a camera, however, the cornea is responsible for about two-thirds of the refractive (or light-focusing) ability of the eye. The lens serves to mediate the changes in focal distance from the eye (at least until age and its sclerosis renders our arms too short for good near-vision!)

Myopia (or near-sightedness) is where the focal point of the eye is in front of the retina. This seems to be genetically determined, although there is some controversial evidence that visual demands at near (such as reading) in childhood may be a contributing factor.[2] The anterior focal point can be thought of as either due to an abnormally long globe or a too steep cornea. A person with myopia sees things up close but distant objects are blurred.

Hyperopia (or far-sightedness) is when the focal point of the eye is behind the retina. This can be due to either a too-short globe or an insufficient curved cornea. Hyperopia is often confused with presbyopia, where the ability to see close things clearly is compromised due to age. In

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general, a hyperope can see things better at a distance than up close.

Astigmatism is more difficult to explain. Although the cornea is aspherical, it can be thought of as the surface of a ball where the radius of curvature is equal in all meridians. *Regular* astigmatism is where it more closely resembles the back surface of a teaspoon: the curvature of the long axis is less steep than the curve of the spoon's surface cross-wise. *Irregular* astigmatism is where there are irregularities such as pits and outcroppings at random places on the surface of the cornea.

It should be remembered that the Snellen system of visual notation (ie., 20/20, 20/100 etc.) is only loosely related to the severity of the visual problem. Ophthalmologists use *Diopters* to anatomically measure ametropia with minus diopters being used to correct myopia and plus diopters for hyperopia. Any optical device worn to correct blurred vision requires a relatively normal retina. As I tell my patients, "the fanciest telephoto lens won't give a good picture if you smudge the film when you loaded it into the camera." All corrective lenses function by re-adjusting the focal point of the perceived image as close as possible to the retina — further back for myopia and the converse for hyperopia.

It follows, then, that any operation which flattens permanently the cornea will ameliorate myopia by pushing the focal point back onto the retina. A procedure which would steepen the curve of the cornea would alleviate hyperopia. Any procedure which could selectively alter the corneal curvature in a particular meridian would tend to "equalize" the regular astigmatism present. A number of such procedures are now available or in the state of development to accomplish these things (Figure 1).

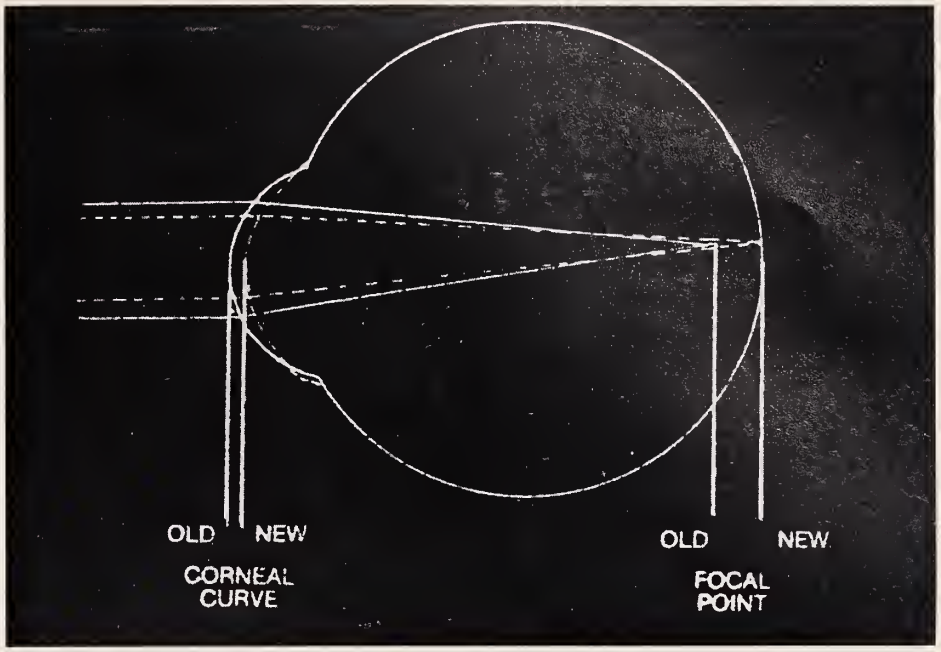


Figure 1 — Schematic cross-section of eye, demonstrating how a less steeply-curved cornea alleviates the blurred image in myopia by moving the focal point posteriorly towards the retina.

Types of Refractive Surgery

The most commonly performed refractive eye operation is seldom thought of as such. Cataract surgery, followed by implantation of an intraocular lens, revolutionized ophthalmology by eliminating the need for heavy, thick cataract glasses which had been necessary for the surgically induced high hyperopia of the aphakic (without a natural lens) eye. State-of-the-art techniques allow the surgeon to come extremely close to emmetropia (no need for glasses). Intraocular surgery always carries with it certain risks, however, and so extremely few ophthalmologists would recommend such surgery for simple myopia.[3]

The first corneal procedure for myopia to gain wide use was *Radial keratotomy* (RK). This was introduced into the United States in the 1970s by a number of private practitioners. It became the focus of heavy controversy when a number of academic ophthalmologists pointed out the high rate of late complications in a somewhat similar procedure investigated and abandoned in Japan in the mid-1950s.[4] Their efforts to restrict investigation of RK to certain ophthalmologists culminated in a massive lawsuit which was only recently settled in favor of the plaintiffs, a group of private practitioners and their patients who had been involved in RK prior to the organization of the PERK study.[5]

Radial keratotomy involves from 4 to 16 non-penetrating (about 90% thickness) corneal incisions, leaving untouched the central optical zone overlying the pupillary visual axis (Figure 2). It works by weakening temporarily the peripheral cornea which then bulges slightly. This causes a compensatory flattening of the central cornea thus lessening (or eliminating) the myopia.[6] There are extremely few complications, particularly when only topical anesthesia is used, and there is no perforation of the full-thickness cornea. Long-term (more than 7 years) follow-up, however, is lacking. Potential concerns, fortunately, do not seem to be developing despite close supervision.

Radial keratotomy has been found by prospective studies to be a safe and effective alternative to glasses and contact lenses.

RK is now considered an acceptable alternative to glasses and contact lenses for myopia and as such is eligible for 3rd party reimbursement except where excluded by a particular

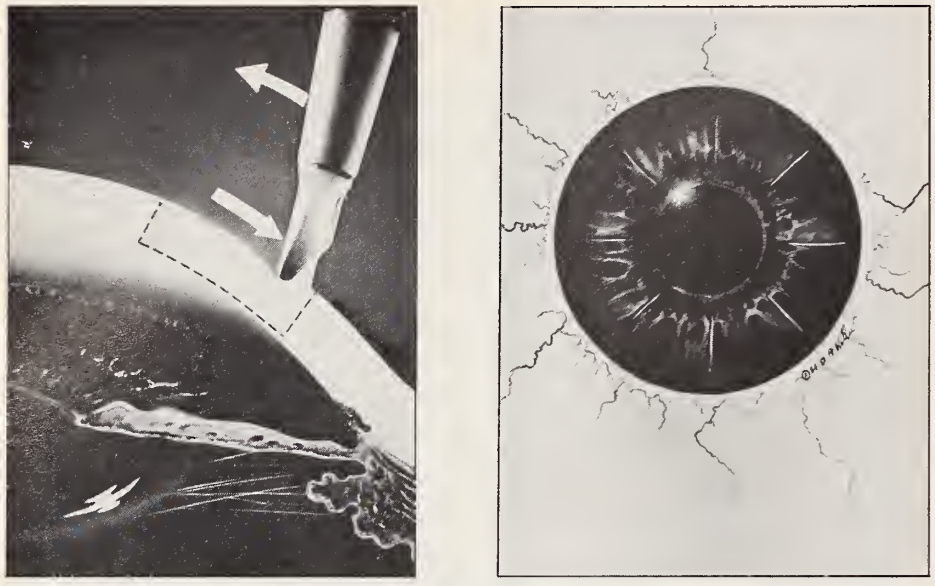


Figure 2 — Pattern and method of peripheral corneal incisions in typical radial keratotomy.

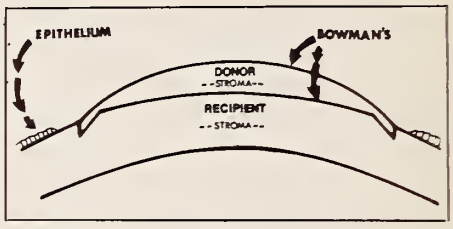


Figure 3 — Epikeratophakia cross section. Note that as the epithelium regenerates it will cover the graft.

policy.[7] It is coming to be performed as an office procedure, requiring about 15 minutes per eye (which are almost never done at the same sitting). Vision is often blurry at first, with light sensitivity persisting a variable amount of time (usually about 1 week, although as long as a year has been reported). Variable visual acuity is often encountered until the cornea stabilizes, usually by 2-3 months post-op.[8] The major disappointment so far is a lack of precision in coordinating the surgical variables to arrive at perfect emmetropia. Some patients end up over or under-corrected, although visual acuity is still usually better than pre-operatively. While every myope enjoys a reduction in the amount of his myopia, the maximum effect seems to be about 7 diopters, which means extremely high myopes are unlikely to notice any significant improvement in vision.

A second refractive procedure is *keratomileusis* (KM) (that is, corneal carving), developed by the South American ophthalmologist, José Barraquer. In this operation, a central 7mm button of anterior cornea is shaved off with a micro-keratome. The corneal button is then frozen in liquid nitrogen and carved on a special cryolathe to predetermined specifications, much like a contact lens. For high myopia, the central area of the cornea is made thinner, thus flattening the corneal curvature after being sutured back into place on the patient's own cornea. For hyperopia, the corneal button is thinned at the periphery, thus steepening the curvature.

This procedure requires a high degree of microsurgical precision, with much room for error, as well as highly sophisticated (and expensive) equipment. The procedure's advantages include correction of degrees of myopia far beyond that of RK, as well as of hyperopia. Visual rehabilitation is rapid with suture removal (a painless, 5-minute office procedure) in about 2 months.

Recent clinical studies have suggested over 85% incidence of 20/50 or better uncorrected visual acuity (good enough to pass Georgia's driver license).[9] Nobody in Georgia is currently performing KM, although this may change soon.

In attempting to simplify KM, a company in California has recently begun to offer pre-carved lenticules (the shaved and carved corneal buttons).This obviates the potentially disastrous complications attendant to shaping the patient's own corneal button but still requires the surgeon to perform the lamellar keratectomy.[10]

Dr. Herbert Kaufman and Marguerite McDonald at Louisiana State University Department of Ophthalmology have developed a further simplification of KM based upon the suturing of a pre-carved donor corneal lenticule to a de-epithelialized but intact host cornea. A 360° 7.5mm peripheral, non-penetrating keratectomy (the groove) is first performed. This "living contact lens" is then sutured into place, allowing the host cornea cells to migrate into and populate the donor corneal button. (Figure 3). Sutures are removed after about 2 months. Called epikeratophakia (adjacent, cornea, lens), this procedure is currently being performed to correct adult myopia and aphakia by the author and for pediatric aphakia for congenital cataract cases by Dr. Fleetwood Maddox, in Macon. The major drawback to these procedures, once again, is a lack of precision in attaining the desired degree of optical correction. Fortunately, such potentially disastrous complications as hemorrhage and infection are exceedingly rare. Should any of the aforementioned occur, however, epikeratophakia offers the advantage over RK and KM of reversibility: the lenticule can be removed and after re-epithelialization, the eye returns to its pre-operative refractive state.

A final method of surgical optical correction of the eye is *alloplastic corneal inlays*. Still in its infancy, this procedure uses the higher index of refraction of plastics to alter the refracting power of the cornea from within the stroma, rather than changing corneal curvature. Dr. Bernard McKarey of Emory has implanted hydrogel lenticules (used in soft contact lenses) in rabbits' and monkeys' corneas.

The major problem yet to be solved is the inlay's tendency to serve as a barrier to the flow of intra-corneal nutrients. Nevertheless, Dr. Peter Choyce in England has successfully implanted corneal inlays made of

polysulfone in several human volunteers with good results.[11]

Conclusions

Refractive surgery of the eye has moved beyond the experimental stage. RK has been found by prospective studies to be a safe and effective alternative to glases and contact lenses. It his highly effective in mild to moderate myopes, less so in the severely near-sighted. RK can be modified to correct astigmatism.

Keratomileusis, a technically very demanding procedure, is gaining acceptance among American ophthalmologists in permanently correcting high myopia, hyperopia, and aphakia. Its more accessible spin-off, epikeratophakia, is under active clinical investigation in Atlanta, and the results are very encouraging.

In the immediate future, we are going to see a marked increase in these (and other) types of refractive surgery. It behooves the ophthalmologist to maintain the highest standards regarding the risk/benefit ratio. The medical community at large needs to be aware of these procedures and kept informed as to technical innovations, improvements, and relative safety.

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PRIMARY LUNG ABSCESS

WAYNE M. HOLLINGER, M.D., AND MURRAY J. GILMAN, M.D.

An update of this relatively uncommon disorder.

Incidence and Clinical Presentation

THE incidence of lung abscess has been reported to range from 4.0 to 12.0 cases per 10,000 hospital admissions.[4, 5] In contrast to pneumococcal pneumonia, primary lung abscess is a relatively uncommon disorder and occurs more frequently in selected clinical settings.[6] Predisposing factors include seizures, alcoholism, peridontitis, gingivitis, and other clinical conditions that increase the likelihood of aspirating infected oral contents.[5, 7, 8] In addition, neurologic disorders that are associated with impaired consciousness or pharyngeal dysfunction and esophageal disorders, such as fistulas, diverticula, or neoplasia, are occasionally identified.[5, 7, 8] Early in this century, nearly 30% of patients with primary lung abscess had previous surgery and anesthesia.[3] With the advent of modern endotracheal tubes, there has been a marked decrease in this iatrogenic illness.

Patients who present with primary lung abscess have usually had a fairly indolent course prior to seeking medical care. As pointed out earlier, these patients aspirate infected oral material and subsequently develop an anaerobic pneumonitis. Bartlett[9] reviewed 46 patients with anaerobic pneumonitis and found that only 20% developed an abscess cavity. He also found that only two of the 46 patients had putrid sputum (a hallmark of anaerobic infection) prior to cavitation. In contrast to pneumococcal pneumonitis where 46% had shaking chills, none with anaerobic pneumonitis had chills. These data emphasize that until the time of cavity formation, an anaerobic pneumonitis may be difficult to differentiate from other types of community-acquired pneumonias (Table 1) unless clinical suspicion is sharpened by predisposing clinical factors.

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Two-thirds of primary lung abscesses occur in the right lung, reflecting the near straight continuation of the trachea into the right main stem bronchus.

The history obtained at the initial evaluation of patients with primary lung abscess usually reveals the presence of cough with or without putrid sputum, fever, chest pain, hemoptysis, and weight loss (Table 2). Physical examination commonly demonstrates a chronically ill-appearing patient with signs of pulmonary consolidation. Rarely, one can detect amphoric breath sounds when there is a large cavity in the chest. Clubbing or pulmonary osteoarthropathy is rare in our experience and suggests an unusually chronic lung abscess or another underlying condition such as neoplasia. Examination of the mouth usually reveals poor hygiene with halitosis.

Gingivitis, peridontitis, and carious teeth are also commonly seen. Although it is unusual to have an edentulous patient present with a primary lung abscess, it has been reported to occur in 7% to 15% of cases.[7, 8] Laboratory data often show leukocytosis and anemia, most often characterized as the anemia of chronic disease (Table 2). Chest roentgenogram will usually reveal a solitary cavity with a thick wall, an air-fluid interface, and often some surrounding infiltrate (Figure 1). The abscess size may range from a few centimeters to huge proportions involving two or three lobes, the so-called giant abscess cavity.

Because lung abscesses occur at the site of aspiration, the dependent areas of the lungs are most often involved. These areas are dictated by the position of the patient at the time of aspiration. Brock demonstrated that the posterior segments of the upper lobes and the superior segments of the lower lobes are the dependent segments in the supine position and are, in fact, where the majority of primary lung abscesses occur.[10] More specifically, two-thirds of primary lung abscesses occur in the right lung, reflecting the near straight continuation of the trachea into the right main stem bronchus. The basilar segments of the lower lobes are dependent in the sitting position, and this is reflected by the high incidence of primary lung abscess in these segments following oral surgery in the pre-antibiotic period.[11, 12] Pleural effusions may also be detected on chest roentgenogram but are not commonly found in an uncomplicated lung abscess.



Figure 1 — PA chest roentgenogram lung abscess. Note cavity (arrow) and horizontal air-fluid interface.

Microbiology

The early study of the microbiology of primary lung abscesses centered around the use of autopsy material. Since these early studies, microbiologic laboratory techniques have improved, the taxonomy of anaerobic organisms has changed and, with the improved prognosis, postmortem specimens have become difficult to obtain. Sputum Gram stains from patients with primary lung abscesses demonstrate large numbers of polymorphonuclear leukocytes and a mixed bacterial flora. Routine sputum cultures are often reported as "normal oral flora."[7, 8] Implication of anaerobic organisms in pathogenesis is complicated by the fact that sputum specimens are readily contaminated with oral secretions and are unsatisfactory in analyzing the lower respiratory tract.[13, 14] Because special microbiologic techniques are needed to culture anaerobic organisms, these organisms cannot be isolated in routine sputum cultures. Bronchoscopic aspirates have also proved to be inadequate samples, as the material obtained through the suction channel is

Table 1 — Lung Abscess: Differential Diagnosis

Infectious	*Non-Infectious*
Staphylococcus aureus	Bronchogenic carcinoma
Klebsiella pneumoniae	Bronchiectasis
Pseudomonas aeruginosa	Wegener's Granulomatosis
Proteus species	Pulmonary infarction
Type 3 pneumococcus	Rheumatoid nodule
Anaerobes	
Legionella pneumophilia	
Infected bullae or blebs	

Table 2 — Frequency of Clinical Features of Lung Abscess

Clinical Features	*Frequency*
Cough	+ + + +
Fever	+ + + +
Putrid sputum	+ + +
Leukocytosis	+ + +
Anemia	+ +
Weight loss	+ +
Chest pain	+ +
Hemoptysis	+

heavily contaminated with oral secretions.[15, 16] Transtracheal aspiration and percutaneous needle aspiration avoid the problem of contamination and have been shown to be valid methods of sampling the lower respiratory tract; however, these methods are occasionally associated with serious complications.[7, 17] With the use of transtracheal aspiration in evaluating the microbiology of primary lung abscess, it has been found that anaerobic isolates occur in 89% of these patients; *Bacteroides melaninogenicus, Fusobacterium nucleatum,* and anaerobic *Streptococci* appear most often.[2, 7] *Bacteroides fragilis* was isolated in 14% of patients, an important finding because *B. fragilis* frequently demonstrates resistance to penicillin. However, the isolation of this particular anaerobe is puzzling. *B. fragilis* is not normally found in the mouth; thus, if aspiration accounts for the development of a primary lung abscess, it becomes difficult to explain the isolation of this organism from primary lung abscesses. Clearly, more work is needed to elucidate completely the microbiology of primary lung abscess and explain the role of the frequently isolated aerobic organism and the role of multiple (aerobic and anaerobic) organisms in the pathogenicity of primary lung abscess.

The prognosis of primary lung abscess has improved dramatically.

Recently a new technique using a plugged telescoping cannula inserted through a fiberoptic bronchoscope has been demonstrated to be effective in obtaining samples of lower respiratory tract secretions. This technique avoids the problem of airway contamination and, when combined with a quantitative culture technique, has been shown to be reliable in identifying lower respiratory tract pathogens.[18-21] However, there are no reported large series of its use in primary lung abscess, and its precise role in the clinical evaluation and therapy of primary lung abscess remains undefined.

Treatment and Prognosis

Prior to the antimicrobial era, therapy for primary lung abscess consisted of conservative therapy or surgical drainage, preferably by a two-stage operation. Surgical therapy improved mortality; however, one-third of the patients died, another third had chronic complications, and the remaining third recovered.[22, 23] With the advent of the antimicrobial era, surgery was reserved for patients who failed antibiotic therapy, defined as failure to close the cavity or establish drainage after 3 to 6 weeks of antibiotics.[8] Lung abscesses that persisted for longer than 3 to 6 weeks were described as having delayed closure. Subsequently, it has been demonstrated that if oral antibiotics are continued for a sufficient length of time, cavities will resolve without the need for surgical intervention. Weiss[24] followed patients with primary lung abscesses and found that the cavity disappeared in 13% of patients by 2 weeks, 44% by 4 weeks, 59% by 6 weeks, and in 70% by 3 months. He found that of 56 cavities, 53 had resolved on chest roentgenogram by the 91st day of oral antibiotics. These data clearly show that delayed closure is not an indication for surgery and that prolonged therapy with oral antibiotics can effectively cure this disease.

Clinical research in the last decade has been directed toward antibiotic choice, dosage, and route of administration. Studies in the 1970s comparing penicillin with clindamycin or tetracycline found no difference in outcome; however, penicillin remains the drug of choice in primary lung abscess for most experts.[3, 7, 25, 26] Typically, penicillin is administrated in doses of 5 million to 12 million units intravenously per day at the initiation of therapy. Once the clinical condition stabilizes, the patient is changed to oral penicillin; however, Weiss found that penicillin administered by mouth in doses of 3 grams per day (4.8 million units) was as effective as parenteral penicillin.[27]

Recently a new technique using a plugged telescoping cannula inserted through a fiberoptic bronchoscope has been demonstrated to be effective in obtaining samples of lower respiratory tract secretions.

Recently, reports have appeared of primary lung abscess failing to respond to penicillin, and some investigators have found an increasing resistance of

anaerobic bacteria to penicillin.[28, 29] In 1983, Levison conducted a randomized prospective study comparing the clinical efficacy of clindamycin and penicillin in patients with primary lung abscess.[30] He found that patients treated with clindamycin had shorter febrile periods and fewer days of putrid sputum. Until recently, clindomycin has been avoided because of its association with pseudomembranous colitis. The etiology of this complication has recently been identified, and effective therapy is now available, making clindamycin a much more acceptable antibiotic choice. Clearly, clindamycin is a very efficacious alternative in the penicillin-allergic patient.[25, 30] Further studies are needed to evaluate its effectiveness, considering the changing antimicrobial sensitivities of anaerobic organisms.

Is it necessary to obtain specimens from lung abscesses and tailor antibiotic therapy to the culture results?

As mentioned earlier, *B. fragilis,* frequently penicillin-resistent, is isolated from primary lung abscesses in as many as 14% of patients who nevertheless clinically respond to penicillin. This may be an artifact of microbiologic techniques, but others have described a symbiotic relationship between anaerobes.[31, 32] If the majority of anaerobes are adequately treated by antimicrobials, the other organisms, such as *B. fragilis,* may be unable to survive.

Another area of controversy in the treatment of primary lung abscess involves the use of bronchoscopy. The literature suggests, and many authorities agree, that patients with primary lung abscess need bronchoscopy to rule out a neoplasia or foreign body.[8, 33-35] In addition, bronchoscopy is advocated as a method to establish drainage in those patients who fail to respond to antibiotics as rapidly as expected.[36, 37] Whether this aids treatment is difficult to assess in the modern day of antibiotics. There are anecdotal reports of bronchoscopy initiating massive aspiration of cavity contents with resultant respiratory failure.[38] This complication seems to be minimized by decreasing sedation and anesthesia so that the cough reflex is functioning and by placing the patient in the lateral position with the affected lung dependent. Thus, while patients need bronchoscopic evaluation at some point, it is unclear whether it aids the resolution of primary lung abscess. However, another aspect of bronchoscopic evaluation must be considered. Specifically, is it necessary to obtain specimens from lung abscesses and tailor antibiotic therapy to the culture results? In support of this hypothesis, Bartlett showed excellent medical success when therapy was directed at specific organisms, both aerobic and anaerobic, that had been isolated by culturing transtracheal aspirates.[7] Other questions that need to be evaluated and answered in future clinical studies are: Which is the best method of obtaining a specimen: percutaneous needle aspiration, transtracheal aspiration, or bronchoscopy with the plugged telescoping cannula? What are the roles of rigid bronchoscopy and/or percutaneous drainage of the abscess cavity in the patient who fails to respond to prolonged antibiotics?[39]

The prognosis of primary lung abscess has improved dramatically. Today most patients with primary lung abscess recover, and those who die usually do so from an underlying condition. Prolonged symptoms prior to presentation for medical therapy and large cavity size correlate with poor prognosis.[5] Empyema, sepsis, and hemorrhage are complications of primary lung abscess that may occur and necessitate specific therapeutic intervention. A specific complication is "spill-over," or diffuse bilateral aspiration of the contents of an abscess cavity, resulting in acute respiratory failure and adult respiratory distress syndrome.[40] The likelihood of this complication seems increased in the patient with an altered gag reflex and a large cavity with a high air-fluid level.

Penicillin, given either orally or intravenously, has been shown to be extremely effective and virtually eliminates the need for surgical intervention.

Specific Recommendations

At our institution, patients admitted with a clinical presentation compatible with primary lung abscess receive the following evaluation and treatment. Blood cultures are obtained to rule out concomitant bacteremia. Sputum specimens are submitted for mycobacterial smears and cultures, and a tuberculin skin test is applied, as tuberculosis should always be

in the differential diagnosis of a cavitary lung lesion. Despite the problems with upper airway contamination, a sputum culture and Gram stain are obtained to determine the presence of predominant aerobic organism. If positive, we would select an antibiotic agent that also covers the aerobe, in addition to antibiotic coverage for anaerobes. Patients receive general supportive care, including adequate nutrition, chest physiotherapy, and postural drainage to the involved area of the lung. If a pharyngeal or esophageal lesion is suspected as a predisposing factor, then a barium swallow is obtained; arterial blood gases determine the need for supplemental oxygen, and patients with pleural effusions undergo thoracentesis to exclude an empyema. Chest roentgenographic evidence of lung abscess and a Gram stain showing mixed flora call for treatment with penicillin-G, 5 million to 12 million units intravenously daily. The patients are followed clinically with temperature record, white blood cell counts, and chest roentgenograms two to three times per week. Those demonstrating a predisposing factor for a Gram-negative pneumonia and/or a predominance of a single Gram-negative organism on Gram stain will typically have an aminoglycoside administered in addition to the penicillin. Patients with primary lung abscess and an acutely toxic clinical picture are treated with broad spectrum antibiotics until resolution of the acute process. Gram stains are screened carefully for organisms consistent with *Staphylococcus aureus,* a well known cause of necrotizing pneumonia.

Patients with primary lung abscess typically respond to intravenous penicillin within 1 week. The first signs of improvement usually occur after 3 days as the fever and white blood cell count begin to decline. If there is no worsening of the chest roentgenogram, if the patient has been afebrile for 3 days, and if the white blood cell count has been declining for 3 days, the patient can be changed to oral penicillin 500 mg to 750 mg four time per day. This therapy is continued until the cavity has resolved or a stable scar remains as a sequela. Patients who fail to respond to intravenous penicillin in 7 to 10 days usually undergo fiberoptic bronchoscopy to obtain bacteriologic cultures and exclude an obstructing lesion. At this time, we may opt to change the penicillin to clindamycin and/or add other antibiotics, depending on culture results. In addition, we feel that patients without obvious predisposing factors, even those who initially respond to penicillin, need fiberoptic bronchoscopy to rule out an obstructing lesion prior to discharge from the hospital.

Summary

Primary lung abscess remains a relatively uncommon disease but one in which medical treatment has been extremely successful. This disease is more common in certain clinical groups, and clinical suspicion should be appropriately directed at these groups. The differential diagnosis makes it important to evaluate the patient thoroughly, especially with bronchoscopy, to eliminate the possibility of an obstructing lesion of the bronchial tree. Penicillin, given either orally or intravenously, has been shown to be extremely effective and virtually eliminates the need for surgical intervention. Finally, whether clindamycin may eventually become the treatment of choice for primary lung abscess is unclear; but clinically, one must consider its use in the patient who is failing to respond to penicillin.

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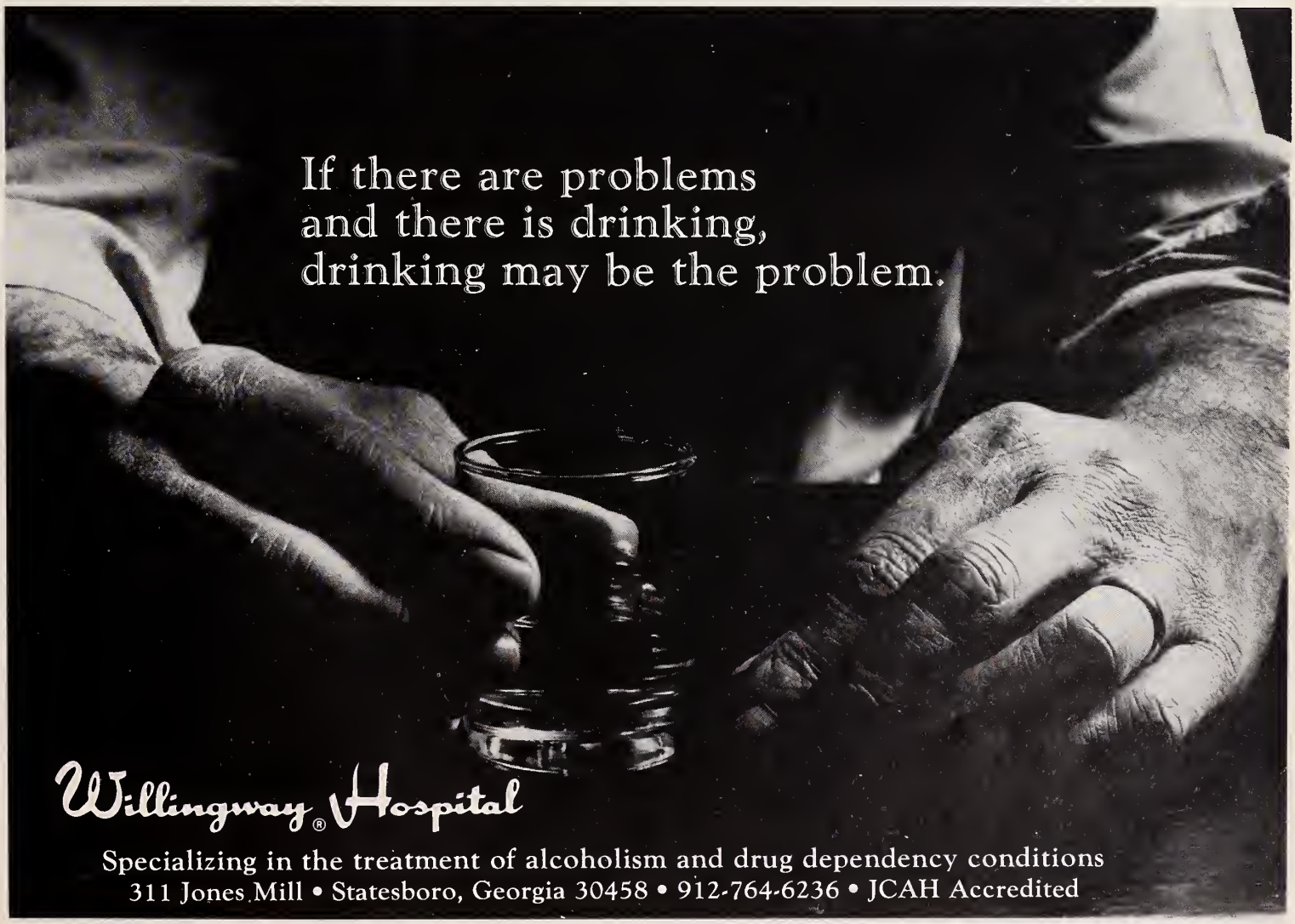
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Buzz Words

David B. Poythress

ABBREVIATED REFERENCES to complex ideas can simplify communication on technical subjects, but only if everyone understands what the "buzz words" mean. As MAG's six-point "tort reform" program gains momentum, we may all find ourselves using these short-hand references more and more frequently. Thus, a short explanation of each of the six concepts and the associated "buzz words" may be helpful to MAG members.

The ultimate purposes of the tort program are to help control the increasing costs of health care which result from extraordinary malpractice judgments and to minimize aberrations in the health care delivery system resulting from extremely high malpractice insurance premiums.

"Tort reform," in its broad sense, refers to the nationwide effort of the medical profession to bring about various changes in the civil justice system, relating primarily to technical rules of procedure and measures of damages in malpractice cases. The ultimate purposes of the program are to help control the increasing costs of health care which result from extraordinary malpractice judgments and to minimize aberrations in the health care delivery system (such as widespread practice limitations and geographical relocation of physicians) resulting from extremely high malpractice insurance premiums. In Georgia, the term refers to MAG's six-point legislative program discussed herein.

Mr. Poythress is MAG's General Counsel.

MAG's Six-Point Tort Reform Program

1. **"Collateral Source Rule":** This rule prohibits disclosure to the jury of any information about compensation which the plaintiff has or will receive for the same injury from another source, such as his employer, insurer, or the government. The historic rationale for the rule has been that crediting collateral source payments against the judgment, or even allowing the jury to know of their existence, would penalize the plaintiff who has wisely protected himself with insurance. The answering arguments are, first, that many collateral source payments are not "bargained for" or "purchased" by the plaintiff in any meaningful sense. And, of vastly more importance, the Rule permits double compensation for the same injury, which serves no valid public purpose.

Some states, such as Florida, have amended the Rule to permit a dollar-for-dollar credit against the judgment itself. Most states that have changed the Rule simply permit disclosure of the collateral source payments to the jury, and this is the MAG proposal.

2. **"Structured Settlements":** This term refers to any plan whereby the defendant pays a judgment otherwise than in a lump sum. Typically, the defendant guarantees to the plaintiff, through a variety of mechanisms (such as the creation of a trust or the purchase of an annuity), a stream of income for a stated period of time, which may be indefinite. In no case is the defendant required to pay more than would otherwise be required in a lump-sum settlement. Structured settlements can be tailored to the needs of individual plaintiffs, and from a purely financial standpoint, they can be very attractive to both plaintiff and the defendant. The voluntary use of structured settlements has increased recently and will undoubtedly continue. The MAG proposal will authorize (but not require) the judge to fashion and impose a structured settlement of judgments in excess of $100,000.

The MAG proposal will authorize (but not require) the judge to fashion and impose a structured settlement of judgments in excess of $100,000.

3. **"Non-economic Loss":** This term refers to damages awarded for non-quantifiable injuries such as pain and suffering, mental anguish, and loss of consortium. These are

sometimes referred to as "general damages," as distinguished from "special damages" for such quantifiable losses as medical bills and lost wages. Under present law, the amount of damages for such non-economic loss rests exclusively within the discretion of the jury. The MAG proposal would place a $250,000 limitation on damages for non-economic losses, the point being that awards in excess of that level are statistical aberrations which impose substantial costs upon other consumers of health care services and which create distortions in the health care delivery system.

4. **"Contingent Fee Regulation":** In most malpractice cases, the fee of the plaintiff's attorney is contingent upon winning or settling the case, and the amount is contingent upon the size of the award. Contingent fees undeniably create a gaming approach to the handling of malpractice cases, which goes far beyond the question of just compensation for whatever injuries the plaintiff may have sustained. MAG proposes a sliding scale on contingency fees: 33% of the first $150,000 recovered; 25% of the next $250,000; and 15% of the balance. This should ameliorate some of the gaming approach to litigation, and will guarantee that in truly bad cases in which a large award is justified, the injured party will receive most of the damages awarded.

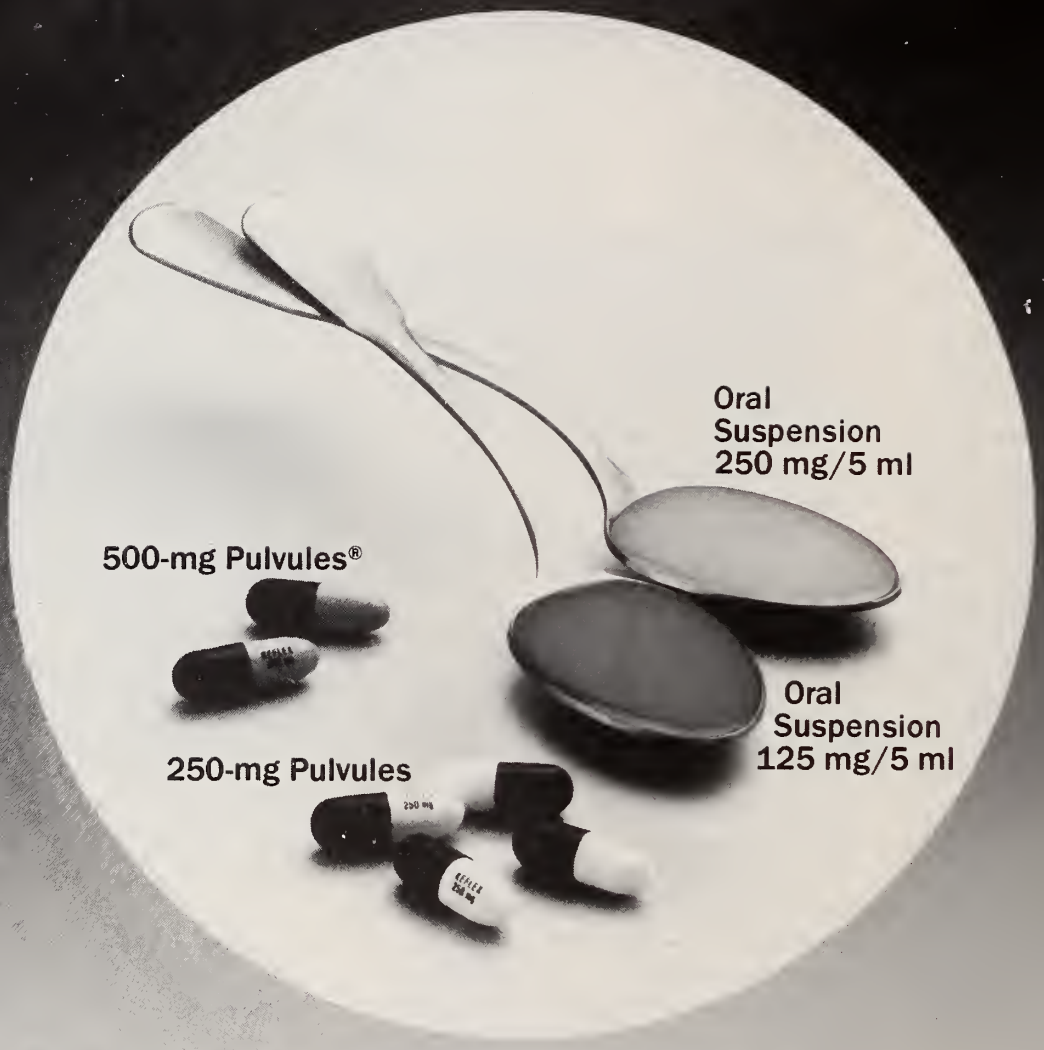
5. **"Additure/Remitture of Judgments":** This term refers to the power of a judge to increase or decrease the size of a verdict, subject to the right of the adversely affected party to demand a new trial. Under present law, a judge may order a new trial if he finds that the verdict is grossly inappropriate, either too high or too low. There are some cases to the effect that a judge may "negotiate" a change in a verdict, using the threat of a new trial. The MAG proposal would simply provide statutory authority for this procedure and liberalize the criteria for ordering a new trial.

6. **"Mandatory Peer Review":** Under present law, insurance companies are required to notify the Composite State Board of Medical Examiners of all judgments or settlements in excess of $10,000; however, there is no express requirement that the Board investigate such reports, and in fact they generally are not. MAG proposes that, in addition to current law, the Board be required to investigate the quality of care provided by any physician who is subject to an award or settlement in excess of $100,000.

In the coming months, you will be hearing and reading a great deal more about the MAG tort reform program, and familiarity with these "buzz words" should be helpful to your understanding of these issues. ■

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Extracorporeal Membrane Oxygenation for Neonatal Respiratory Insufficiency

E. J. Lovett, Jr., M.D., and Wesley Covitz, M.D.

Neonatal respiratory distress is a frequent reason for referral to tertiary centers. Traditional medical support in intensive care nurseries has proven extremely effective in treating the majority of patients referred. Unfortunately, 12-15,000 infants per year in the United States do not respond to treatment and die within the neonatal period.[1] Another subset survive to leave the intensive care nursery but have recurrent pulmonary difficulties due to the development of bronchopulmonary dysplasia. A relatively new technique, extracorporeal membrane oxygenation (ECMO), has the potential to successfully treat critically ill newborns with respiratory insufficiency and is now available in Georgia.

ECMO has its origins in the heart-lung machines developed during the 1950s for open heart surgery. The successful adaptation of ECMO to infants by Robert Bartlett, M.D., of the University of Michigan[2] has led to the development of ECMO protocols by approximately 10 centers in the United States. Recently, the Neonatology Section at the Medical College of Georgia, under the direction of William P. Kanto, Jr., M.D., has begun an ECMO protocol.

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The basis of the ECMO circuit is a membrane oxygenator which serves to oxygenate the patients' blood. The membrane oxygenator represents a departure from the original heart-lung pump in that the latter used direct exposure of blood to oxygen by bubbling oxygen through the blood. The membrane oxygenator allows oxygen to enter the blood via diffusion much as in the pulmonary capillary bed. This helps to reduce hemolysis.[3]

When the patient is placed on ECMO, the right carotid artery is cannulated and serves at the arterial input. The right external jugular vein is cannulated and serves as the venous withdrawal line. Blood withdrawn from the jugular is transferred to the membrane oxygenator and mixed with heparin solution, nutrients, and electrolyte solutions. The blood goes through the oxygenator and heat exchanger and then into the arterial return line.

The initial pump rate through the ECMO circuit provides approximately 80% of the cardiac output to maintain the infant's PO_2 at 60 ± 5mm. As the patient's pulmonary vascular resistance drops, the pump rate is gradually reduced. Total ECMO times range from 90-300 hours. The cost of ECMO is $1000-2000 per day.[4]

An area of major concern has been the selection of patients for ECMO. Most current protocols emphasize that those patients eligible for the procedure should have at least a 90% mortality risk using current therapeutic modalities.[5] The patients selected usually have one or more of the following: hyaline membrane disease, severe meconium aspiration, or diaphragmatic hernia. They have been unresponsive to maximal ventilator support; and, in the case of those with persistent pulmonary hypertension, unresponsive to hyperventilation and pulmonary vasodilators.

A relatively new technique, ECMO has the potential to successfully treat critically ill newborns with respiratory insufficiency and is now available in Georgia.

The Neonatal Pulmonary Insufficiency Index and the alveolar-arterial oxygen gradient (A-a DO_2) have been used for patient selection. The former has not proven as accurate in predicting mortality for the group with persistent pulmonary hypertension due to the traditional use of hyperventilation. The Neonatal Pulmonary Insufficiency Index depends on the relationship between pH and pO_2, and hyperventilation causes a shift in pH which precludes its use. On the other hand, those patients with an A-a DO_2 of 600 mm for 12 hours had a 94% mortality. The accuracy of positive prediction was 96% and of negative prediction, 82%.[5]

Those patients who meet the requirements of respiratory insufficiency are then screened to rule out cyanotic heart disease, renal disease, and significant central nervous system disease. An area of significant concern is bleeding into the central nervous system. Many severely compromised infants have had seizures prior to ECMO evaluation. The majority of these are secondary to hypoxia but may be due to intracranial hemorrhage. The cause of this bleeding is uncertain but probably relates to an increased capillary fragility. Patients with grade IV intraventricular hemorrhage are excluded from ECMO.

As ECMO is a relatively new technique, little long term follow-up data is available. Five of six survivors at the Medical College of Virginia had normal growth and development. They also had normal lung function and no significant EEG abnormalities. The sixth patient had an air embolus and suffers from cortical atrophy.[6] The overall survival rate for patients going on ECMO has been 65-75%.[3] The majority of these have normal growth and development and most importantly, apparent freedom from bronchopulmonary dysplasia. This is relevant to assessing the cost effectiveness of ECMO, since approximately 10% of (non ECMO) infants subjected to high FiO_2 and ventilator pressure settings suffer from bronchopulmonary dysplasia. The morbidity of bronchopulmonary dysplasia is significant and impacts on cost and the emotional burden.

This brief description of ECMO will hopefully stimulate interest in a new concept. As additional experience is obtained, criteria for ECMO will likely become less stringent, and many more infants with respiratory insufficiency will be carried through those critical first few days to recovery.

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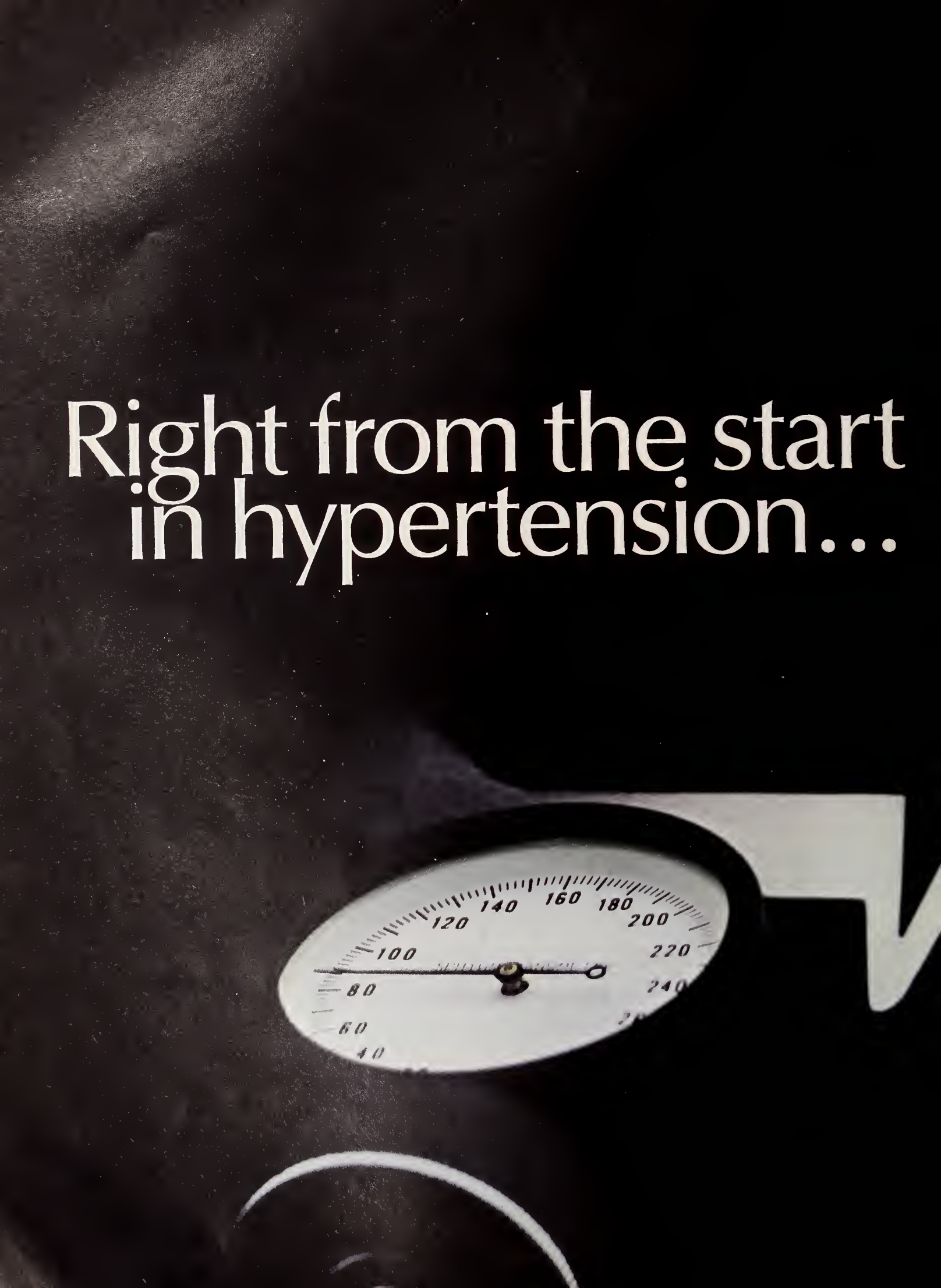
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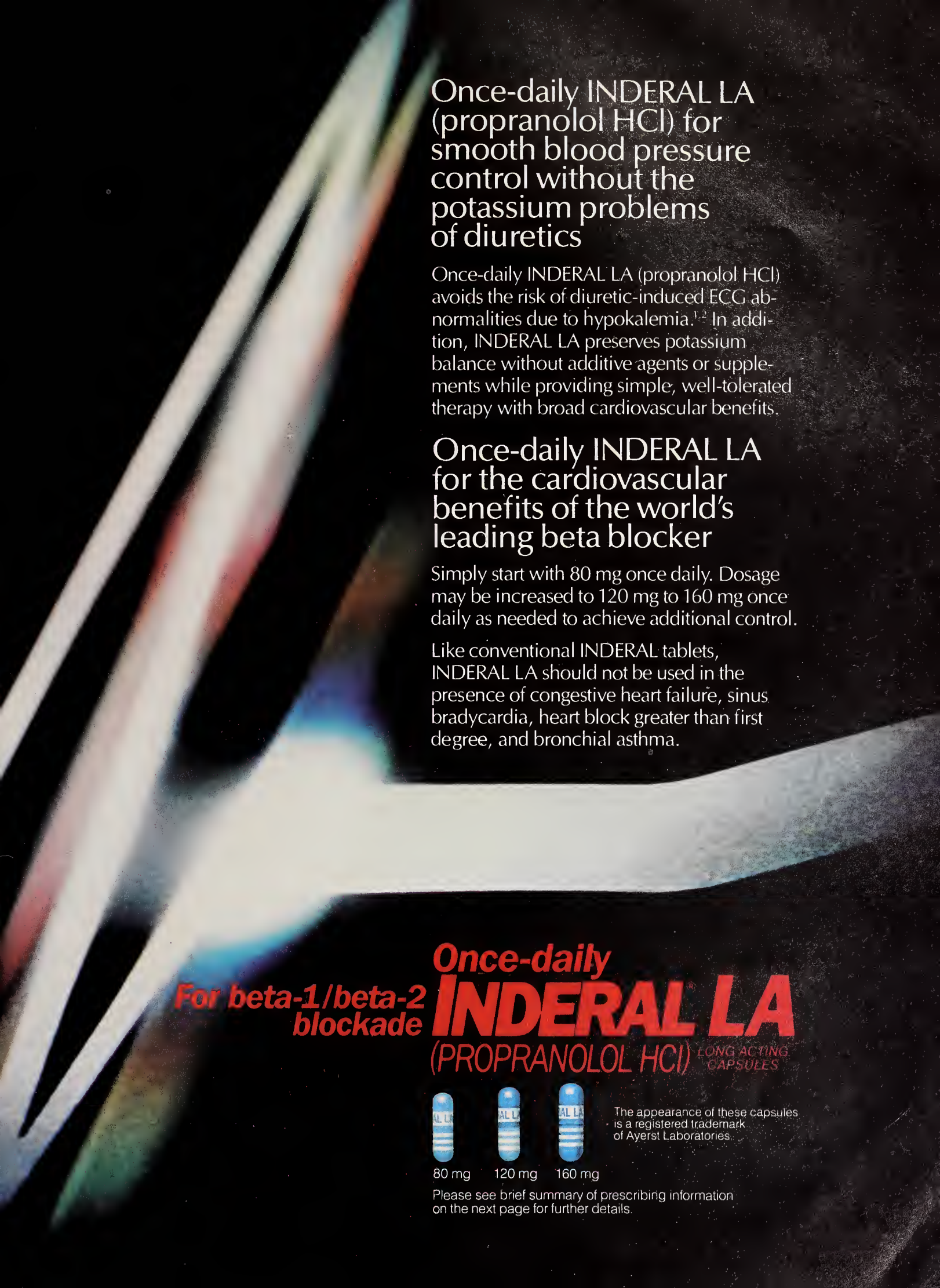
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INDERAL LA should not be considered a simple mg for mg substitute for conventional propranolol and the blood levels achieved do not match (are lower than) those of two to four times daily dosing with the same dose. When changing to INDERAL LA from conventional propranolol, a possible need for retitration upwards should be considered especially to maintain effectiveness at the end of the dosing interval. In most clinical settings, however, such as hypertension or angina where there is little correlation between plasma levels and clinical effect, INDERAL LA has been therapeutically equivalent to the same mg dose of conventional INDERAL as assessed by 24-hour effects on blood pressure and on 24-hour exercise responses of heart rate, systolic pressure and rate pressure product. INDERAL LA can provide effective beta blockade for a 24-hour period.

The mechanism of the antihypertensive effect of INDERAL has not been established. Among the factors that may be involved in contributing to the antihypertensive action are (1) decreased cardiac output, (2) inhibition of renin release by the kidneys, and (3) diminution of tonic sympathetic nerve outflow from vasomotor centers in the brain. Although total peripheral resistance may increase initially, it readjusts to or below the pretreatment level with chronic use. Effects on plasma volume appear to be minor and somewhat variable. INDERAL has been shown to cause a small increase in serum potassium concentration when used in the treatment of hypertensive patients.

In angina pectoris, propranolol generally reduces the oxygen requirement of the heart at any given level of effort by blocking the catecholamine-induced increases in the heart rate, systolic blood pressure, and the velocity and extent of myocardial contraction. Propranolol may increase oxygen requirements by increasing left ventricular fiber length, end diastolic pressure and systolic ejection period. The net physiologic effect of beta-adrenergic blockade is usually advantageous and is manifested during exercise by delayed onset of pain and increased work capacity.

In dosages greater than required for beta blockade, INDERAL also exerts a quinidine-like or anesthetic-like membrane action which affects the cardiac action potential. The significance of the membrane action in the treatment of arrhythmias is uncertain.

The mechanism of the antimigraine effect of propranolol has not been established. Beta-adrenergic receptors have been demonstrated in the pial vessels of the brain.

Beta receptor blockade can be useful in conditions in which, because of pathologic or functional changes, sympathetic activity is detrimental to the patient. But there are also situations in which sympathetic stimulation is vital. For example, in patients with severely damaged hearts, adequate ventricular function is maintained by virtue of sympathetic drive which should be preserved. In the presence of AV block, greater than first degree, beta blockade may prevent the necessary facilitating effect of sympathetic activity on conduction. Beta blockade results in bronchial constriction by interfering with adrenergic bronchodilator activity which should be preserved in patients subject to bronchospasm.

Propranolol is not significantly dialyzable.

INDICATIONS AND USAGE. Hypertension: INDERAL LA is indicated in the management of hypertension; it may be used alone or used in combination with other antihypertensive agents, particularly a thiazide diuretic. INDERAL LA is not indicated in the management of hypertensive emergencies.

Angina Pectoris Due to Coronary Atherosclerosis: INDERAL LA is indicated for the long-term management of patients with angina pectoris.

Migraine: INDERAL LA is indicated for the prophylaxis of common migraine headache. The efficacy of propranolol in the treatment of a migraine attack that has started has not been established and propranolol is not indicated for such use.

Hypertrophic Subaortic Stenosis: INDERAL LA is useful in the management of hypertrophic subaortic stenosis, especially for treatment of exertional or other stress-induced angina, palpitations, and syncope. INDERAL LA also improves exercise performance. The effectiveness of propranolol hydrochloride in this disease appears to be due to a reduction of the elevated outflow pressure gradient which is exacerbated by beta-receptor stimulation. Clinical improvement may be temporary.

CONTRAINDICATIONS. INDERAL is contraindicated in 1) cardiogenic shock; 2) sinus bradycardia and greater than first degree block; 3) bronchial asthma; 4) congestive heart failure (see WARNINGS) unless the failure is secondary to a tachyarrhythmia treatable with INDERAL.

WARNINGS. CARDIAC FAILURE: Sympathetic stimulation may be a vital component supporting circulatory function in patients with congestive heart failure, and its inhibition by beta blockade may precipitate more severe failure. Although beta blockers should be avoided in overt congestive heart failure, if necessary, they can be used with close follow-up in patients with a history of failure who are well compensated and are receiving digitalis and diuretics. Beta-adrenergic blocking agents do not abolish the inotropic action of digitalis on heart muscle.

IN PATIENTS WITHOUT A HISTORY OF HEART FAILURE, continued use of beta blockers can, in some cases, lead to cardiac failure. Therefore, at the first sign or symptom of heart failure, the patient should be digitalized and/or treated with diuretics, and the response observed closely, or INDERAL should be discontinued (gradually, if possible).

IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following abrupt discontinuance of INDERAL therapy. Therefore, when discontinuance of INDERAL is planned the dosage should be gradually reduced over at least a few weeks, and the patient should be cautioned against interruption or cessation of therapy without the physician's advice. If INDERAL therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute INDERAL therapy and take other measures appropriate for the management of unstable angina pectoris. Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease who are given propranolol for other indications.

Nonallergic Bronchospasm (e.g., chronic bronchitis, emphysema)—PATIENTS WITH BRONCHOSPASTIC DISEASES SHOULD IN GENERAL NOT RECEIVE BETA BLOCKERS. INDERAL should be administered with caution since it may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta receptors.

MAJOR SURGERY: The necessity or desirability of withdrawal of beta-blocking therapy prior to major surgery is controversial. It should be noted, however, that the impaired ability of the heart to respond to reflex adrenergic stimuli may augment the risks of general anesthesia and surgical procedures.

INDERAL (propranolol HCl), like other beta blockers, is a competitive inhibitor of beta-receptor agonists and its effects can be reversed by administration of such agents, e.g., dobutamine or isoproterenol. However, such patients may be subject to protracted severe hypotension. Difficulty in starting and maintaining the heartbeat has also been reported with beta blockers.

DIABETES AND HYPOGLYCEMIA: Beta-adrenergic blockade may prevent the appearance of certain premonitory signs and symptoms (pulse rate and pressure changes) of acute hypoglycemia in labile insulin-dependent diabetes. In these patients, it may be more difficult to adjust the dosage of insulin.

THYROTOXICOSIS: Beta blockade may mask certain clinical signs of hyperthyroidism. Therefore, abrupt withdrawal of propranolol may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm. Propranolol does not distort thyroid function tests.

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker. In one case this resulted after an initial dose of 5 mg propranolol.

PRECAUTIONS. *General:* Propranolol should be used with caution in patients with impaired hepatic or renal function. INDERAL (propranolol HCl) is not indicated for the treatment of hypertensive emergencies.

Beta adrenoreceptor blockade can cause reduction of intraocular pressure. Patients should be told that INDERAL may interfere with the glaucoma screening test. Withdrawal may lead to a return of increased intraocular pressure.

Clinical Laboratory Tests: Elevated blood urea levels in patients with severe heart disease, elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase.

DRUG INTERACTIONS: Patients receiving catecholamine-depleting drugs such as reserpine should be closely observed if INDERAL is administered. The added catecholamine-blocking action may produce an excessive reduction of resting sympathetic nervous activity which may result in hypotension, marked bradycardia, vertigo, syncopal attacks, or orthostatic hypotension.

Carcinogenesis, Mutagenesis, Impairment of Fertility: Long-term studies in animals have been conducted to evaluate toxic effects and carcinogenic potential. In 18-month studies in both rats and mice, employing doses up to 150 mg/kg/day, there was no evidence of significant drug-induced toxicity. There were no drug-related tumorigenic effects at any of the dosage levels. Reproductive studies in animals did not show any impairment of fertility that was attributable to the drug.

Pregnancy: Pregnancy Category C. INDERAL has been shown to be embryotoxic in animal studies at doses about 10 times greater than the maximum recommended human dose.

There are no adequate and well-controlled studies in pregnant women. INDERAL should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers: INDERAL is excreted in human milk. Caution should be exercised when INDERAL is administered to a nursing woman.

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS. Most adverse effects have been mild and transient and have rarely required the withdrawal of therapy.

Cardiovascular: bradycardia, congestive heart failure; intensification of AV block, hypotension; paresthesia of hands; thrombocytopenic purpura; arterial insufficiency, usually of the Raynaud type.

Central Nervous System: lightheadedness; mental depression manifested by insomnia, lassitude, weakness, fatigue; reversible mental depression progressing to catatonia; visual disturbances; hallucinations; an acute reversible syndrome characterized by disorientation for time and place, short-term memory loss, emotional lability, slightly clouded sensorium, and decreased performance on neuropsychometrics.

Gastrointestinal: nausea, vomiting, epigastric distress, abdominal cramping, diarrhea, constipation, mesenteric arterial thrombosis, ischemic colitis.

Allergic: pharyngitis and agranulocytosis, erythematous rash, fever combined with aching and sore throat, laryngospasm and respiratory distress.

Respiratory: bronchospasm.

Hematologic: agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpura.

Auto-Immune: In extremely rare instances, systemic lupus erythematosus has been reported.

Miscellaneous: alopecia, LE-like reactions, psoriasiform rashes, dry eyes, male impotence, and Peyronie's disease have been reported rarely. Oculomucocutaneous reactions involving the skin, serous membranes and conjunctivae reported for a beta blocker (practolol) have not been associated with propranolol.

DOSAGE AND ADMINISTRATION. INDERAL LA provides propranolol hydrochloride in a sustained-release capsule for administration once daily. If patients are switched from INDERAL tablets to INDERAL LA capsules, care should be taken to assure that the desired therapeutic effect is maintained. INDERAL LA should not be considered a simple mg for mg substitute for INDERAL. INDERAL LA has different kinetics and produces lower blood levels. Retitration may be necessary especially to maintain effectiveness at the end of the 24-hour dosing interval.

HYPERTENSION—*Dosage must be individualized.* The usual initial dosage is 80 mg INDERAL LA once daily, whether used alone or added to a diuretic. The dosage may be increased to 120 mg once daily or higher until adequate blood pressure control is achieved. The usual maintenance dosage is 120 to 160 mg once daily. In some instances a dosage of 640 mg may be required. The time needed for full hypertensive response to a given dosage is variable and may range from a few days to several weeks.

ANGINA PECTORIS—*Dosage must be individualized.* Starting with 80 mg INDERAL LA once daily, dosage should be gradually increased at three to seven day intervals until optimum response is obtained. Although individual patients may respond at any dosage level, the average optimum dosage appears to be 160 mg once daily. In angina pectoris the value and safety of dosage exceeding 320 mg per day have not been established.

If treatment is to be discontinued, reduce dosage gradually over a period of a few weeks (see WARNINGS).

MIGRAINE—*Dosage must be individualized.* The initial oral dose is 80 mg INDERAL LA once daily. The usual effective dose range is 160-240 mg once daily. The dosage may be increased gradually to achieve optimum migraine prophylaxis. If a satisfactory response is not obtained within four to six weeks after reaching the maximum dose, INDERAL LA therapy should be discontinued. It may be advisable to withdraw the drug gradually over a period of several weeks.

HYPERTROPHIC SUBAORTIC STENOSIS—80-160 mg INDERAL LA once daily.

PEDIATRIC DOSAGE—At this time the data on the use of the drug in this age group are too limited to permit adequate directions for use.

REFERENCES

1. Holland OB, Nixon JV, Kuhnert L: Diuretic-induced ventricular ectopic activity. *Am J Med* 1981;70:762-768. **2.** Holme I, Helgeland A, Hjermann I, et al: Treatment of mild hypertension with diuretics. The importance of ECG abnormalities in the Oslo study and in MRFIT. *JAMA* 1984;251:1298-1299.

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PERSONALS

First District

Pamela Stitt, M.D., a family practitioner, has opened a practice in Waynesboro. Dr. Stitt comes from Glendale Adventist Medical Center in California, where she worked in the Family Practice Residency Program as a primary care physician for the 700-bed facility.

Third District

Urologist **Kelly C. Roberts, M.D.,** has opened his offices in Americus. Dr. Roberts had previously practiced medicine in Tallahassee, Florida.

Fifth District

William W. Moore, Jr., M.D., a neurosurgeon from Atlanta, will be installed as President-Elect of the Southern Medical Association at its 79th Annual Scientific Assembly in Orlando, Florida, November 17-20. Dr. Moore is a former president of the MAG, a delegate to the American Medical Association, and Clinical Professor of Surgery (Neurosurgery) at Emory University School of Medicine. He is certified by the American Board of Neurological Surgery and is Fellow in the American College of Surgeons.

Sixth District

General surgeon **Davey Herring, M.D.,** recently opened his practice in Bainbridge.

Tenth District

Augusta physician **Robert Greenblatt, M.D.,** known internationally for his work in reproductive endocrinology, participated in the dedication of a Bordeaux, France, clinic named in his honor September 13. The clinic for reproductive medicine is named Institut Robert Greenblatt. Since 1965, he has made four trips to Paris as a visiting teacher. Dr. Greenblatt received international recognition for his pioneering work in the present-day sequential oral contraceptive pill and the oral fertility pill. He has written and edited 23 books. He is the recipient of several international honors, including the Legion of Honor Award of France and the Sociedad de Ginecologia y Obstetricia de Monterrey (Mexico) Gold Medal Award. He came to MCG 50 years ago as a research fellow, chaired the school's endocrinology department for 28 years, and now is a professor emeritus of endocrinology at MCG.

Taher A. El Gammal, M.D., of Augusta, has been named a Fellow of the American College of Radiology. The honor was bestowed in a ceremony at the annual meeting of the American College of Radiology in Montreal, Canada. Dr. El Gammal is from Cairo, Egypt, and is presently associated with the Medical College of Georgia. He is a graduate of the Cairo University School of Medicine in Cairo, Egypt.

DEATHS

Laurence B. Dunn

Laurence B. Dunn, M.D., 86, died September 13. He was in general practice in Savannah for more than 40 years before retiring in 1971. Dr. Dunn was a graduate of Princeton University and the Harvard Medical School. He was a veteran of World War I and World War II.

He is survived by two sons, two sisters, and three grandchildren.

David B. Fillingim

Family practitioner, David B. Fillingim, M.D., of Savannah, died September 15 at age 75. He was a graduate of Mercer University and the University of Georgia College of Medicine. He was a captain in the U.S. Army Air Force during World War II. He practiced medicine in Savannah for 50 years. Dr. Fillingim was chief of staff at Candler General Hospital from 1949-1950. He was a Fellow in the International College of Surgeons and the American Academy of Family Practice.

Surviving are his wife, five sons, one daughter, one sister, and 13 grandchildren.

James H. Litton

James H. Litton, M.D., died September 15. He was 76. Dr. Litton had been in general practice in Tucker since 1946. He received his medical degree from the University of Tennessee and interned at St. Joseph's Hospital in St. Joseph, MO. He served in World War II in the Medical Corps and earned a Bronze Star, Silver Star, and a Purple Heart.

Survivors include his wife, two daughters and two sisters.

James G. McDaniel

James G. McDaniel, M.D., 81, of Atlanta died September 29 of complications resulting from a stroke. Dr. McDaniel was retired and previously had been in general practice in Atlanta for 42 years. He graduated from the Medical College of Georgia in 1927 and interned at University Hospital in Augusta. He was a Navy veteran of World War II. Dr. McDaniel was president of MAG in 1964-65. He belonged to the Alpha honorary medical society.

Surviving are two sons, two daughters, two brothers, one sister and nine grandchildren.

Marlan LeVan Rhame

Marlan LeVan Rhame, M.D., a Decatur psychiatrist, died July 9. He received his medical degree from the Medical College of South Carolina, completed his internship at St. Louis City Hospital, and completed his residency at Duke University. While serving in the U.S. Air Force, he was chief of psychiatry at Travis Air Force Base and Eglin Air Force Base. Dr. Rhame entered private practice in Decatur in 1963 and was the first private psychiatrist in DeKalb County. He was an active member of the Southern Psychiatric Association and the American Group Psychotherapy Association.

He is survived by his wife and three sons. ■

Quotes

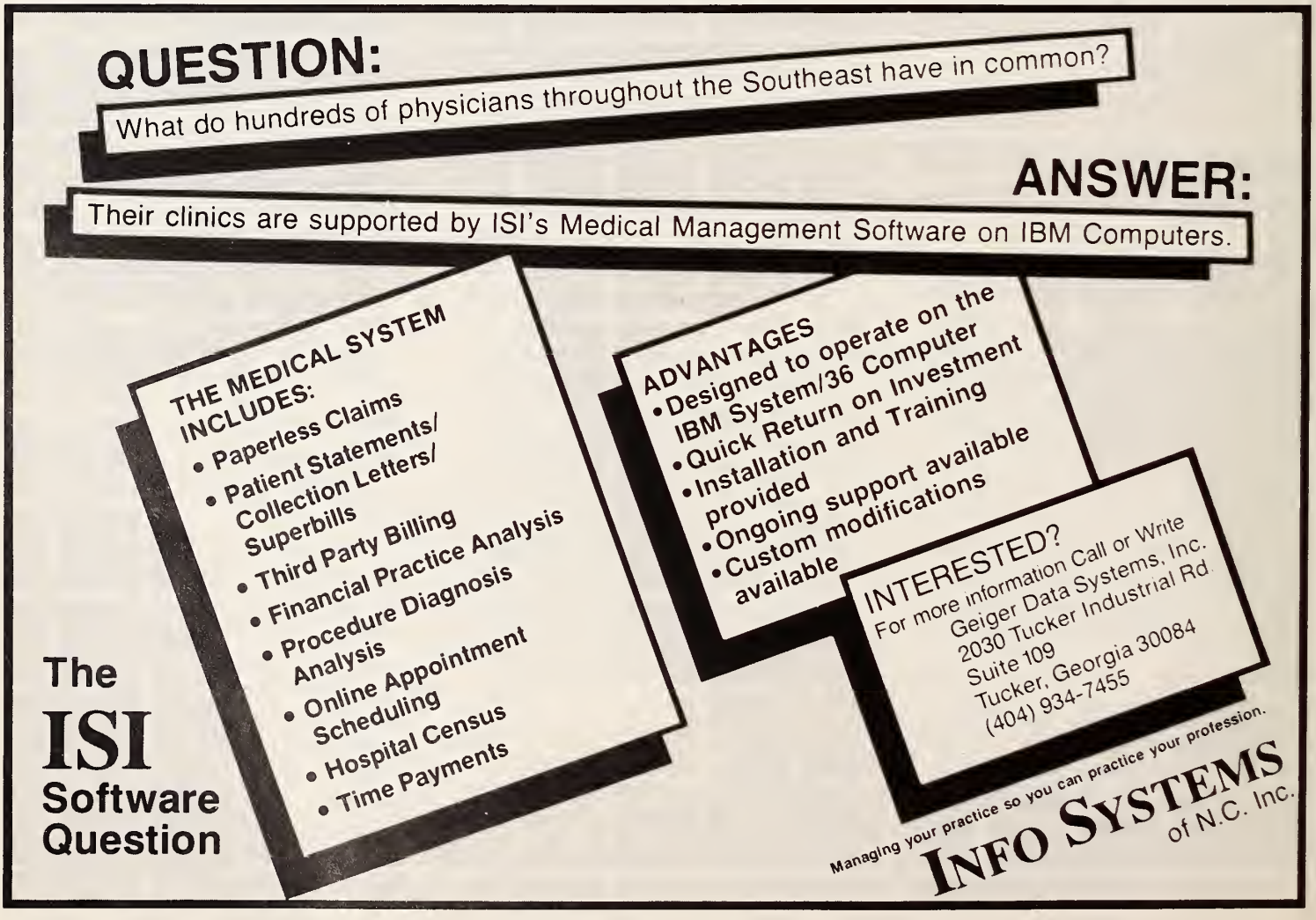
The friend who can be silent with us in a moment of despair or confusion, who can stay with us in an hour of grief and bereavement, who can tolerate not knowing, not curing, not healing, and face with us the reality of our powerlessness, that is the friend who cares.
HENRI NOUWEN

I cannot find language of sufficient energy to convey my sense of the sacredness of private integrity.
RALPH WALDO EMERSON

You have two types of energy. One is physical, the other is mental and spiritual. The latter is by far the more important, for from your subconscious mind you can draw vast power and strength in time of need.
CLEMENT STONE

Next to a sincere compliment, I think I like a well-deserved and honest rebuke.
WILLIAM FEATHER

Every cloud has its silver lining, but it is sometimes a little difficult to get it to the mint.
DON MARQUIS



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> Soter NA, Wasserman SI, Austen KF. Cold urticaria release into circulation of histamine and eosinophil chemotactic factor of anaphylaxis during cold challenge. N Engl J Med 1976;294:687-90.

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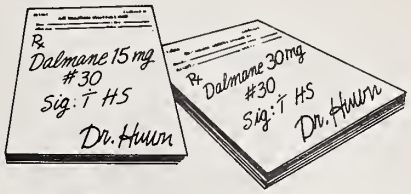
The recommended dose in elderly or debilitated patients is 15 mg. Contraindicated in pregnancy.

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References: **1.** Kales J, *et al: Clin Pharmacol Ther 12:*691-697, Jul-Aug 1971. **2.** Kales A, *et al: Clin Pharmacol Ther 18:*356-363, Sep 1975. **3.** Kales A, *et al: Clin Pharmacol Ther 19:*576-583, May 1976. **4.** Kales A, *et al: Clin Pharmacol Ther 32:*781-788, Dec 1982. **5.** Frost JD Jr, DeLucchi MR: *J Am Geriatr Soc 27:*541-546, Dec 1979. **6.** Dement WC, *et al: Behav Med,* pp. 25-31, Oct 1978. **7.** Kales A, Koles JD: *J Clin Psychopharmacol 3:*140-150, Apr 1983. **8.** Tennant FS, *et al:* Symposium on the Treatment of Sleep Disorders, Teleconference, Oct 16, 1984. **9.** Greenblatt DJ, Allen MD, Shader RI: *Clin Pharmacol Ther 21:*355-361, Mar 1977.



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Before prescribing, please consult complete product information, a summary of which follows:

Indications: Effective in all types of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening, in patients with recurring insomnia or poor sleeping habits; in acute or chronic medical situations requiring restful sleep. Objective sleep laboratory data have shown effectiveness for at least 28 consecutive nights of administration. Since insomnia is often transient and intermittent, prolonged administration is generally not necessary or recommended. Repeated therapy should only be undertaken with appropriate patient evaluation.

Contraindications: Known hypersensitivity to flurazepam HCl; pregnancy. Benzodiazepines may cause fetal damage when administered during pregnancy. Several studies suggest an increased risk of congenital malformations associated with benzodiazepine use during the first trimester. Warn patients of the potential risks to the fetus should the possibility of becoming pregnant exist while receiving flurazepam. Instruct patients to discontinue drug prior to becoming pregnant. Consider the possibility of pregnancy prior to instituting therapy.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. An additive effect may occur if alcohol is consumed the day following use for nighttime sedation. This potential may exist for several days following discontinuation. Caution against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Potential impairment of performance of such activities may occur the day following ingestion. Not recommended for use in persons under 15 years of age. Withdrawal symptoms rarely reported; abrupt discontinuation should be avoided with gradual tapering of dosage for those patients on medication for a prolonged period of time. Use caution in administering to addiction-prone individuals or those who might increase dosage.

Precautions: In elderly and debilitated patients, it is recommended that the dosage be limited to 15 mg to reduce risk of oversedation, dizziness, confusion and/or ataxia. Consider potential additive effects with other hypnotics or CNS depressants. Employ usual precautions in severely depressed patients, or in those with latent depression or suicidal tendencies, or in those with impaired renal or hepatic function.

Adverse Reactions: Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported: headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of leukopenia, granulocytopenia, sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations, and elevated SGOT, SGPT, total and direct bilirubins, and alkaline phosphatase; and paradoxical reactions, *e.g.*, excitement, stimulation and hyperactivity.

Dosage: Individualize for maximum beneficial effect. *Adults:* 30 mg usual dosage; 15 mg may suffice in some patients. *Elderly or debilitated patients:* 15 mg recommended initially until response is determined.

Supplied: Capsules containing 15 mg or 30 mg flurazepam HCl.

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Please see references and summary of product information on reverse side.

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Please consult full prescribing information before use. A summary follows:

INDICATIONS AND USAGE: SORBITRATE (isosorbide dinitrate) is indicated for the treatment and prevention of angina pectoris. All dosage forms of isosorbide dinitrate may be used prophylactically to decrease frequency and severity of anginal attacks and can be expected to decrease the need for sublingual nitroglycerin.

The sublingual and chewable forms of the drug are indicated for acute prophylaxis of angina pectoris when taken a few minutes before situations likely to provoke anginal attacks. Because of a slower onset of effect, the oral forms of isosorbide dinitrate are not indicated for acute prophylaxis.

CONTRAINDICATIONS: SORBITRATE is contraindicated in patients who have shown purported hypersensitivity or idiosyncrasy to it or other nitrates or nitrites. Epinephrine and related compounds are ineffective in reversing the severe hypotensive events associated with overdose and are contraindicated in this situation.

WARNINGS: The benefits of SORBITRATE during the early days of an acute myocardial infarction have not been established. If one elects to use organic nitrates in early infarction, hemodynamic monitoring and frequent clinical assessment should be used because of the potential deleterious effects of hypotension.

PRECAUTIONS: General: Severe hypotensive response, particularly with upright posture, may occur with even small doses of SORBITRATE. The drug should therefore be used with caution in subjects who may have blood volume depletion from diuretic therapy or in subjects who have low systolic blood pressure (eg, below 90 mmHg). Paradoxical bradycardia and increased angina pectoris may accompany nitrate-induced hypotension. Nitrate therapy may aggravate the angina caused by hypertrophic cardiomyopathy.

Marked symptomatic, orthostatic hypotension has been reported when calcium channel blockers and organic nitrates were used in combination. Dose adjustment of either class of agents may be necessary.

Tolerance to this drug and cross-tolerance to other nitrates and nitrites may occur. Tolerance to the vascular and antianginal effects of isosorbide dinitrate or nitroglycerin has been demonstrated in clinical trials, experience through occupational exposure, and in isolated tissue experiments in the laboratory. The importance of tolerance to the appropriate use of isosorbide dinitrate in the management of patients with angina pectoris has not been determined. However, one clinical trial using treadmill exercise tolerance (as an end point) found an 8-hour duration of action of oral isosorbide dinitrate following the first dose (after a 2-week placebo washout) and only a 2-hour duration of effect of the same dose after 1 week of repetitive dosing at conventional dosing intervals. On the other hand, several trials have been able to differentiate isosorbide dinitrate from placebo after 4 weeks of therapy and, in open trials, an effect seems detectable for as long as several months.

Tolerance clearly occurs in industrial workers continuously exposed to nitroglycerin. Moreover, physical dependence also occurs since chest pain, acute myocardial infarction, and even sudden death have occurred during temporary withdrawal of nitroglycerin from the workers. In clinical trials in angina patients, there are reports of anginal attacks being more easily provoked and of rebound in the hemodynamic effects soon after nitrate withdrawal. The relative importance of these observations to the routine, clinical use of isosorbide dinitrate is not known. However, it seems prudent to gradually withdraw patients from isosorbide dinitrate when the therapy is being terminated, rather than stopping the drug abruptly.

Information for Patients: Headache may occur during initial therapy with SORBITRATE. Headache is usually relieved by the use of standard headache remedies or by lowering the dose and tends to disappear after the first week or two of use.

Drug Interactions: Alcohol may enhance any marked sensitivity to the hypotensive effect of nitrates.

Isosorbide dinitrate acts directly on vascular smooth muscle; therefore, any other agent that depends on vascular smooth muscle as the final common path can be expected to have decreased or increased effect depending on the agent.

Carcinogenesis, Mutagenesis, Impairment of Fertility: No long-term studies in animals have been performed to evaluate the carcinogenic potential of this drug. A modified two-litter reproduction study in rats fed isosorbide dinitrate at 25 or 100 mg/kg/day did not reveal any effects on fertility or gestation or any remarkable gross pathology in any parent or offspring fed isosorbide dinitrate as compared with rats fed a basal-controlled diet.

Pregnancy Category C: Isosorbide dinitrate has been shown to cause a dose-related increase in embryotoxicity (increase in mummified pups) in rabbits at oral doses 35 and 150 times the maximum recommended human daily dose. There are no adequate and well-controlled studies in pregnant women. SORBITRATE should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers: It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when SORBITRATE is administered to a nursing woman.

Pediatric Use: The safety and effectiveness of SORBITRATE in children has not been established.

ADVERSE REACTIONS: Adverse reactions, particularly headache and hypotension, are dose-related. In clinical trials at various doses, the following have been observed:

Headache is the most common (reported incidence varies widely, apparently being dose-related, with an average occurrence of about 25%) adverse reaction and may be severe and persistent. Cutaneous vasodilation with flushing may occur. Transient episodes of dizziness and weakness, as well as other signs of cerebral ischemia associated with postural hypotension, may occasionally develop (the incidence of reported symptomatic hypotension ranges from 2% to 36%). An occasional individual will exhibit marked sensitivity to the hypotensive effects of nitrates and severe responses (nausea, vomiting, weakness, restlessness, pallor, perspiration, and collapse) may occur even with the usual therapeutic dose. Drug rash and/or exfoliative dermatitis may occasionally occur. Nausea and vomiting appear to be uncommon. Case reports of clinically significant methemoglobinemia are rare at conventional doses of organic nitrates. The formation of methemoglobin is dose-related and, in the case of genetic abnormalities of hemoglobin that favor methemoglobin formation, even conventional doses of organic nitrate could produce harmful concentrations of methemoglobin.

DOSAGE AND ADMINISTRATION: For the treatment of angina pectoris, the usual starting dose for sublingual SORBITRATE is 2.5 to 5 mg; for chewable tablets, 5 mg; for oral (swallowed) tablets, 5 to 20 mg; and for controlled-release forms, 40 mg.

SORBITRATE should be titrated upward until angina is relieved or side effects limit the dose. In ambulatory patients, the magnitude of the incremental dose increase should be guided by measurements of standing blood pressure.

The initial dosage of sublingual or chewable SORBITRATE for prophylactic therapy in angina pectoris patients is generally 5 or 10 mg every 2 to 3 hours. Adequate controlled clinical studies demonstrating the effectiveness of chronic maintenance therapy with these dosage forms have not been reported.

SORBITRATE in oral doses of 10 to 40 mg given every 6 hours or in oral controlled-release doses of 40 to 80 mg given every 8 to 12 hours is generally recommended. The extent to which development of tolerance should modify the dosage program has not been defined. *The oral controlled-release forms of isosorbide dinitrate should not be chewed.*

DOSAGE FORMS AVAILABLE: Sublingual Tablets (2.5, 5, 10 mg); Chewable Tablets (5, 10 mg); Oral Tablets (5, 10, 20, 30, 40 mg); Sustained Action Tablets (40 mg).

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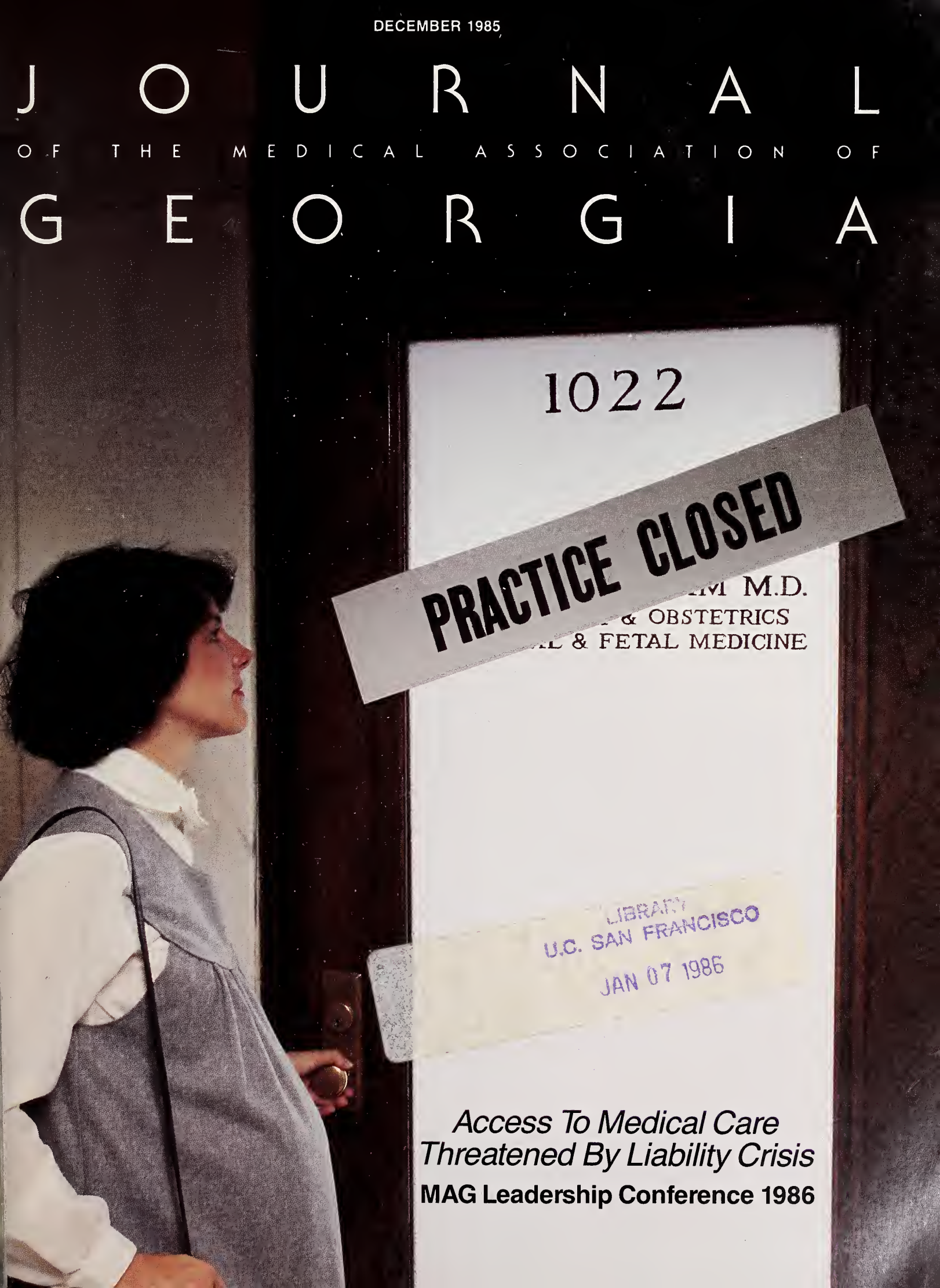
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See preceding page for brief summary of prescribing information.

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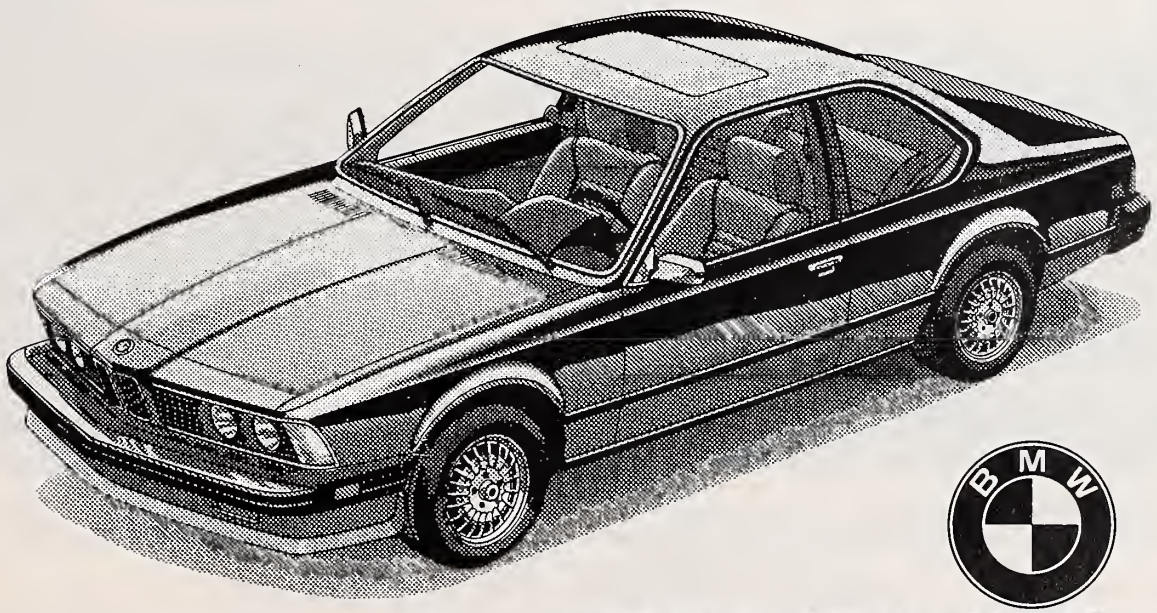
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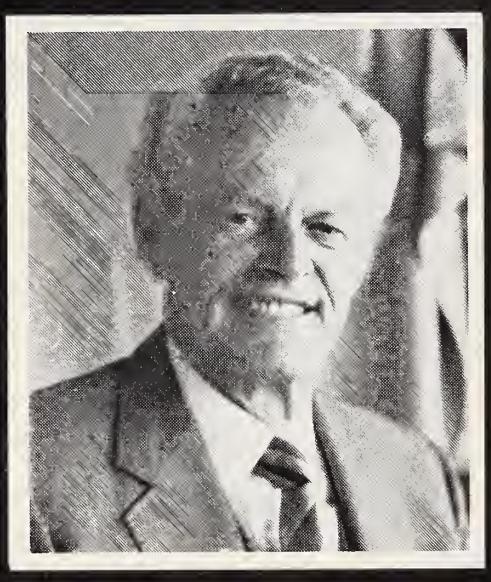
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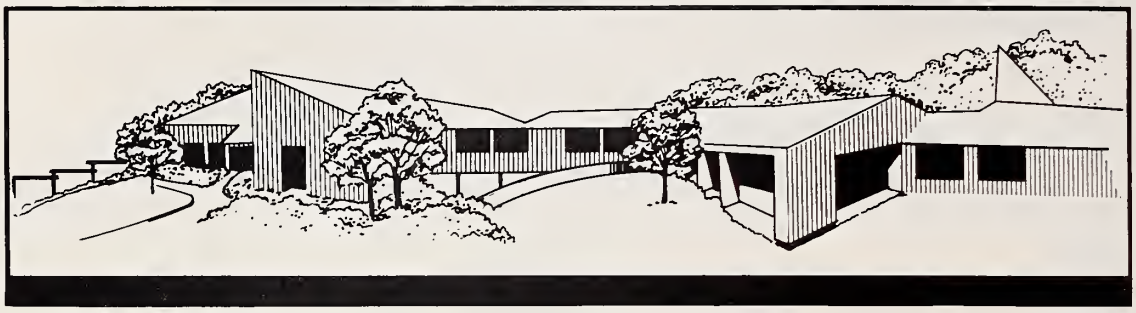
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COVER

The liability insurance crisis in Georgia is threatening to limit access to medical care. Several articles in this issue of the *Journal* focus on what is one of the most pressing problems affecting the practice of medicine in this state: pp. 811, 814, 818, and 825. Read them and become better informed.

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The Big C

DECEMBER is a most special month for me because of Christmas and all that goes with it. A few years ago, John Wayne referred to a disease from which he suffered as the "Big C." As much as I liked the "Duke" and as much as I consider that disease in my everyday work, I have to disagree. Christmas is my "Big C." Let me tell you way.

Christmas is *colder climes* with *caps* and *coats*
and *cautious capers*.
It's *cheery cards* by *Currier* & Ives
Of *covered* bridges and horse drawn *carriages*
and smoking *chimneys*.

There are *crowds* of *customers* and *courteous clerks*.
Charge cards clutter around the *cashiers*
And *costs* will be *considered* later.
Colorful creations compete with our *contemplations*
And family *conferences* seem almost *continuous*.
Crowded cars with *colored cushions*
Bring *crackers* and *cousins*
That *cause* lots of *cooking* in *crocks* and *casseroles*.
There are *cashew* nuts and *coconuts*,
and *candles calmly* glowing.

There's *candy*, and *cakes*, and *cookies* in *canisters*.
And *clearing* and *cleaning* for the
company that's *coming*.
And there are *confident* thoughts of
casual, cozy comfort.

Carefully done *cartons* in *colored coverings*
Cover an area on the *carpet*.
Children dream of *cuddly* toys or *clanging* trains,
and the *coming* of Mr. *Claus*.
And parents *coax children* for *camera* poses.

Christmas carols mix with *chimes*.
Childrens' concerts cause concern of time,
and *choirs* give *cantatas*.
And young people go *carolling*,
and who *could* help but sing?

And *'cross* the *country congregations convene*
in *Christian Churches* with *crosses covering*,
To *celebrate* and *cheer* the *coming* of *Christ*.
Who with *celestial commencing conveyed* the *covenant*
of *communion* and *confession*.

Our *concerns center* toward those *confined* or *convalescent*,
and *compassion covers* our *consciousness*.
And *coming* through it all with *custom* and *clarity*
Is the *concept* of *CARING* ----------
the true meaning of *Christmas*.

Being a physician places each of us in a particular role of caring. As someone said, "It goes with the territory." I believe this is one of the most important aspects of our profession. We certainly have unlimited opportunities, and I hope we never pass them by.

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24-25 — *Atlanta:* **An Introduction to Radial Keratotomy.** Category 1 credit. Contact Office of CME, Emory Univ. Sch. of Med., 1440 Clifton Rd., Ste. 110, Atlanta 30322. PH:404/727-5695.

25 — *Atlanta:* **Ethical Decision-Making in Medicine.** Category 1 credit. Contact Office of CME, Emory Univ. Sch. of Med., 1440 Clifton Rd., Atlanta 30322. PH:404/727-5695.

20-31 — *Atlanta:* **MKSAP VII, American College of Physicians Review Course.** Category 1 credit. Contact Office of CME, Emory Univ. Sch. of Med., 1440 Clifton Rd., Atlanta 30322. PH:404/727-5695.

FEBRUARY

2-4 — *Atlanta:* **MAG Annual Leadership Conference.** Contact Steve Davis, MAG, 938 Peachtree St., Atlanta 30309. PH:404/876-7535 or 800/282-0224 (in Georgia).

3-7 — *Atlanta:* **Magnetic Resonance Imaging.** Category 1 credit. Contact Office of CME, Emory Univ. Sch. of Med., 1440 Clifton Rd., Atlanta 30322. PH:404/727-5695.

17-21 — *Atlanta:* **Magnetic Resonance Imaging.** Category 1 credit. Contact Office of CME, Emory Univ. Sch. of Med., 1440 Clifton Rd., Atlanta 30303. PH: 727-5695.

22-23 — *Atlanta:* **Georgia Society of Anesthesiologists.** Category 1 credit. Contact William Hammonds, MD, Secy-Treas., GSA, Emory Univ. Hosp., Dept. of Anesth., 1360 Clifton Rd., Atlanta 30322. PH:404/321-0111.

26-March 2 — *San Juan, PR:* **The Eighth Annual Pediatric Postgraduate Course.** AMA Category 1 and AAFP prescribed credits. Contact Judson L. Hawk, Jr., MD, Scottish Rite Children's Hosp., 1001 Johnson Ferry Rd., Atlanta 30363. PH:404/257-2040.

27-28 — *Atlanta:* **Sports Nutrition Conference.** Contact Jana R. Kicklighter, Ph.D., R.D., Dept. of Nutrition and Dietetics, Box 873, Univ. Plaza, Ga. State Univ., Atlanta 30303. PH:404/658-3085.

MARCH

3-8 — *Augusta:* **21st Annual Family Practice Symposium.** Category 1 credit. Contact Div. of Cont. Ed., MCG, Augusta 30912. PH:404/828-3967.

8-15 — *Copper Mountain, CO:* **XI Annual Snow Job in Gynecology and Obstetrics.** Category 1 credit. Contact Office of CME, Emory Univ. Sch. of Med., 1440 Clifton Rd., Atlanta 30322. PH:404/727-5695.

10-14 — *Atlanta:* **Magnetic Resonance Imaging.** Category 1 credit. Contact Office of CME, Emory Univ. Sch. of Med., 1440 Clifton Rd., Atlanta 30322. PH:404/727-5695.

11-16 — *Park City, Utah:* **Modern Dissection Techniques of Bone, Biometals, and Bioplastics.** Category 1 credit. Contact Office of CME, Emory Univ. Sch. of Med., 1440 Clifton Rd., Atlanta 30322. PH:404/727-5695.

12-13 — *Augusta:* **Gynecologic Oncology.** Category 1 credit. Contact Div. of Cont. Ed., MCG, Augusta 30912. PH:404/828-3967.

17-18 — *Atlanta:* **Pharmacology for the Anesthesiologist.** Category 1 credit. Contact Office of CME, Emory Univ. Sch. of Med., 1440 Clifton Rd., Atlanta 30322. PH:404/727-5695.

17-21 — *Park City, Utah:* **Snowplow Orthopaedics with Special Emphasis on Common Musculoskeletal Pain Problems.** Category 1 credit. Contact Office of CME, Emory Univ. Sch. of Med., 1440 Clifton Rd., Atlanta 30322. PH:404/727-5695.

21-22 — *Augusta:* **Flexible Fiberoptic Sigmoidoscopy.** Category 1 credit. Contact Div. of Cont. Ed., MCG, Augusta 30912. PH:404/828-3967.

24-26 — *Atlanta:* **Annual Pediatric Postgraduate Course.** Category 1 credit. Contact Office of CME, Emory Univ. Sch. of Med., 1440 Clifton Rd., Atlanta 30322. PH:404/727-5695.

31-April 4 — *Atlanta:* **Magnetic Resonance Imaging.** Category 1 credit. Contact Office of CME, Emory Univ. Sch. of Med., 1440 Clifton Rd., Atlanta 30322. PH:404/727-5695.

APRIL

19-20 — *Atlanta:* **The Cardiac Patient: Management for Cardiopulmonary Bypass.** Category 1 credit. Contact Office of CME, Emory Univ. Sch. of Med., 1440 Clifton Rd., Atlanta 30322. PH:404/727-5695.

19-23 — *Sea Island:* **Second Annual Masters in Gynecology.** Category 1 credit. Contact Office of CME, Emory Univ. Sch. of Med., 1440 Clifton Rd., Atlanta 30322. PH:404/727-5695.

21-25 — *Atlanta:* **Magnetic Resonance Imaging.** Category 1 credit. Contact Office of CME, Emory Univ. Sch. of Med., 1440 Clifton Rd., Atlanta 30322. PH:404/727-5695.

24-27 — *Callaway Gardens:* **MAG House of Delegates.** Contact MAG, 938 Peachtree St., Atlanta 30309. PH:404/876-7535 or 800/282-0224 (in Georgia).

28-May 3 — *Augusta:* **21st Annual Family Practice Symposium.** Category 1 credit. Contact Div. of Cont. Ed., MCG, Augusta 30912. PH:404/828-3967.

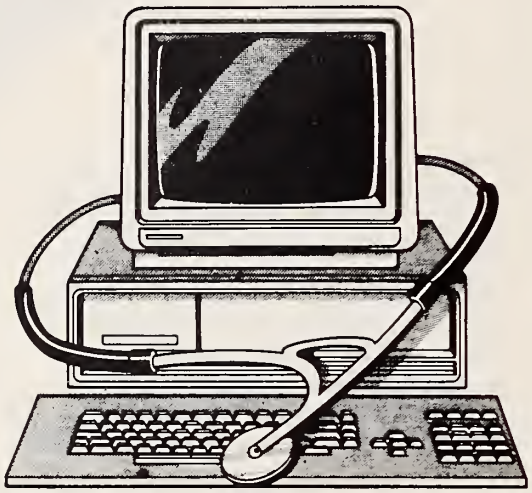
MAY

1-2 — *Atlanta:* **Pediatric Rheumatology Update '86.** Category 1 credit. Contact Office of CME, Emory Univ. Sch. of Med., 1440 Clifton Rd., Atlanta 30322. PH:404/727-5695.

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"Practice Closed": A Sign Of The Future?

" MAG's efforts to achieve professional liability reform in Georgia, affecting all types of liability exposure, demand your support. "

More than physicians of any other specialty, obstetricians across the nation are being threatened by the professional liability crisis today. The American College of Obstetricians and Gynecologists reports that fully two-thirds of its members have been sued for medical malpractice. Professional liability insurance rates are consequently so high, and the likelihood of a suit so great, that thousands of obstetricians are giving up the practice of delivering babies.

You may have seen recently on national television the interview with a Florida OB/GYN doctor who chose to quit obstetrics after 32 years of practice — and more than 6,000 babies. When he started practice in 1953, his malpractice insurance cost him $300 or $400. Last year his premium was $44,000. When he faced an insurance bill of $56,000 this year, he gave up. "You have to deliver a lot of babies to come up with fifty-six thousand dollars," he said.

The emotional and financial drain has become too great for this doctor and many others. For instance, 25% of Florida's OB/GYNs discontinued obstetrical care in 1983; another 30% are in the process of doing so. Several years ago more than half of Florida's family practitioners were delivering babies; a study indicates only 6% were practicing obstetrics recently. The results of MAG and MAG Mutual's health care cost and access survey, published in this issue of the *Journal,* indicates serious ramifications for Georgia health care as well.

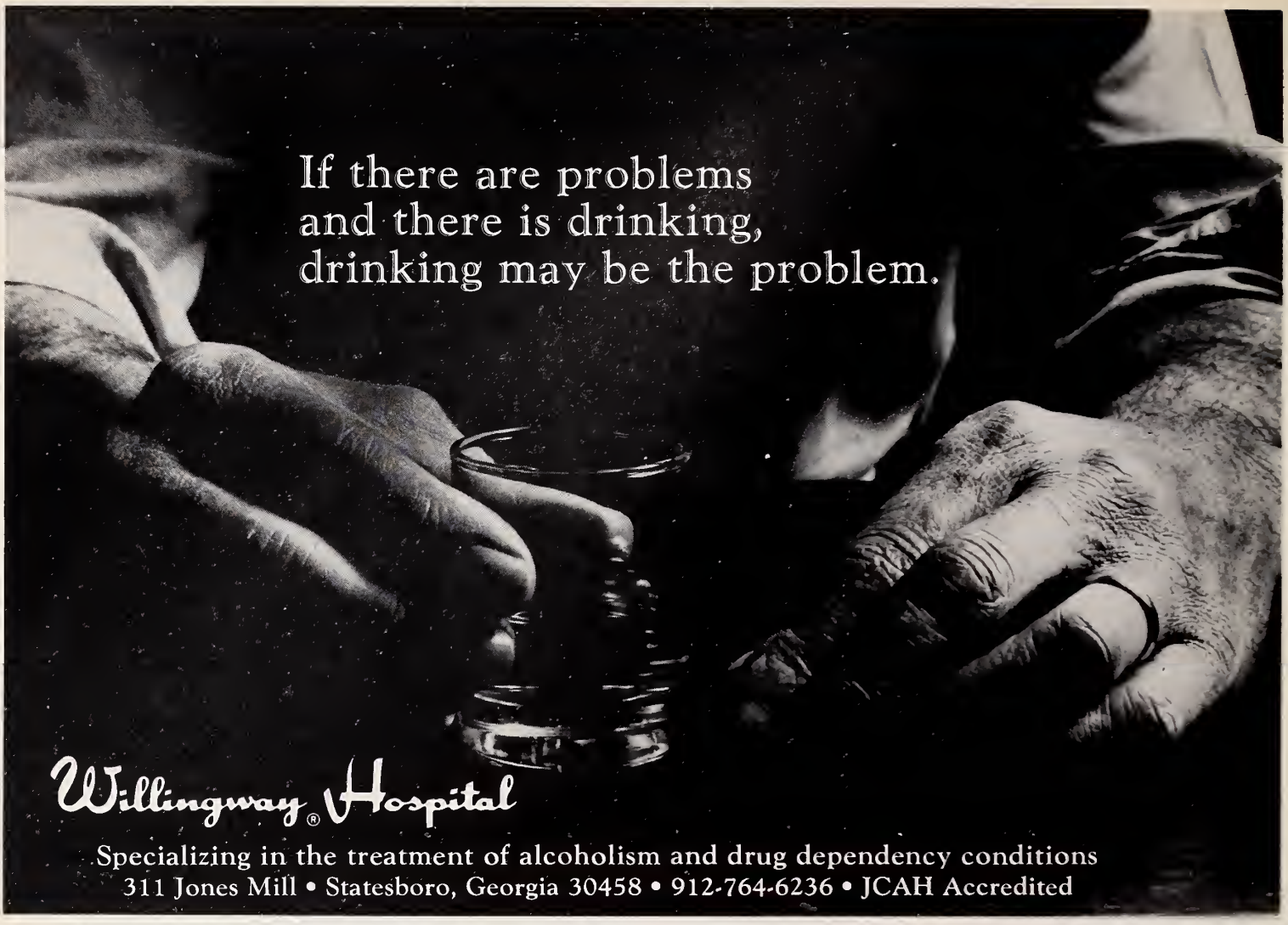
Americans have always been a very litigious people; Alexis de Tocqueville made that observation 150 years ago. But what has happened in the past 5 or 6 years has shown that Americans now believe that anything less than an ideal medical result entitles them not only to sue the doctor but to sue with the expectation of becoming fabulously wealthy.

We must not fool ourselves into thinking the liability problem is only due to increased litigation and unrealistic expectations, however. Malpractice does occur and must be rigorously combated. MAG's Risk Management Program, which is being continuously expanded, is one of several avenues I urge everyone to take.

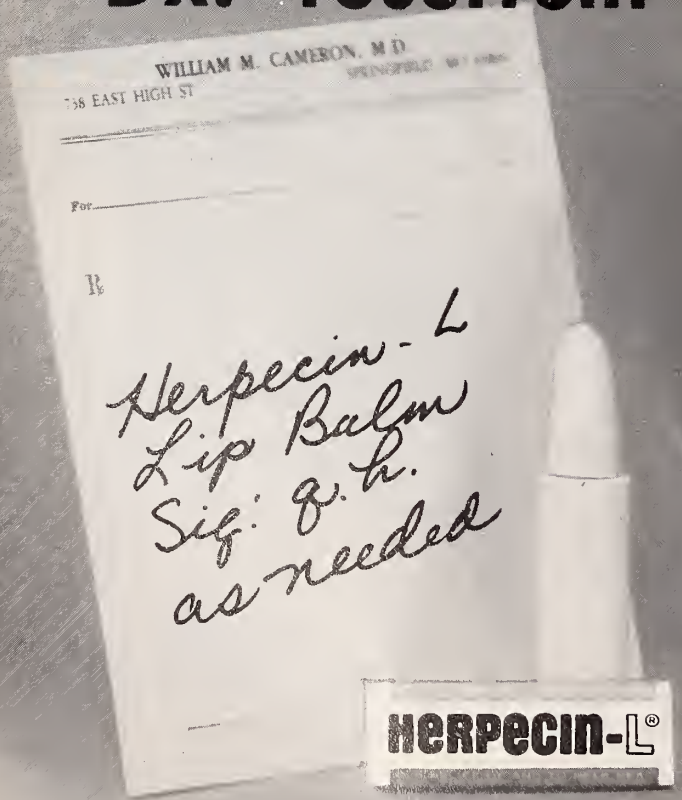
The Medical Association of Georgia and various specialty societies are working hard to correct this critical situation in yet another very important way. *Our efforts to achieve professional liability reform in Georgia, affecting all types of liability exposure, demand your support.* Certainly they deserve your participation in MAG's 1986 Leadership Conference. I encourage you to consult the conference program featured in this issue of your *Journal.*

With your help and commitment, "Practice Closed" won't be a sign facing our patients in the future. Get involved! For no one s going to do it for you. . . .

Charles J. Ward, M.D.
Chairman, Malpractice Committee
Georgia Obstetrical-Gynecological Society



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Low incidence of side effects
CARDIZEM® (diltiazem HCl) produces an incidence of adverse reactions not greater than that reported with placebo therapy, thus contributing to the patient's sense of well-being.

*Cardizem is indicated in the treatment of angina pectoris due to coronary artery spasm and in the management of chronic stable angina (classic effort-associated angina) in patients who cannot tolerate therapy with beta-blockers and/or nitrates or who remain symptomatic despite adequate doses of these agents.

References:
1. Strauss WE, McIntyre KM, Parisi AF, et al: Safety and efficacy of diltiazem hydrochloride for the treatment of stable angina pectoris: Report of a cooperative clinical trial. Am J Cardiol 49:560-566, 1982.
2. Pool PE, Seagren SC, Bonanno JA, et al: The treatment of exercise-inducible chronic stable angina with diltiazem: Effect on treadmill exercise. Chest 78 (July suppl):234-238, 1980.

Reduces angina attack frequency*
42% to 46% decrease reported in multicenter study.[1]

Increases exercise tolerance*
In Bruce exercise test,[2] control patients averaged 8.0 minutes to onset of pain; Cardizem patients averaged 9.8 minutes ($P<.005$).

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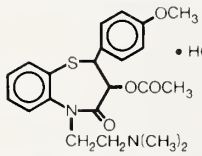
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PROFESSIONAL USE INFORMATION

cardizem®
(diltiazem HCl)
30 mg and 60 mg tablets

DESCRIPTION

CARDIZEM® (diltiazem hydrochloride) is a calcium ion influx inhibitor (slow channel blocker or calcium antagonist). Chemically, diltiazem hydrochloride is 1,5-Benzothiazepin-4(5H)one,3-(acetyloxy) -5-[2-(dimethylamino)ethyl]-2,3-dihydro-2-(4-methoxyphenyl)-, monohydrochloride,(+) -cis-. The chemical structure is:



Diltiazem hydrochloride is a white to off-white crystalline powder with a bitter taste. It is soluble in water, methanol, and chloroform. It has a molecular weight of 450.98. Each tablet of CARDIZEM contains either 30 mg or 60 mg diltiazem hydrochloride for oral administration.

CLINICAL PHARMACOLOGY

The therapeutic benefits achieved with CARDIZEM are believed to be related to its ability to inhibit the influx of calcium ions during membrane depolarization of cardiac and vascular smooth muscle.

Mechanisms of Action. Although precise mechanisms of its antianginal actions are still being delineated, CARDIZEM is believed to act in the following ways:

1. Angina Due to Coronary Artery Spasm: CARDIZEM has been shown to be a potent dilator of coronary arteries both epicardial and subendocardial. Spontaneous and ergonovine-induced coronary artery spasm are inhibited by CARDIZEM.
2. Exertional Angina: CARDIZEM has been shown to produce increases in exercise tolerance, probably due to its ability to reduce myocardial oxygen demand. This is accomplished via reductions in heart rate and systemic blood pressure at submaximal and maximal exercise work loads.

In animal models, diltiazem interferes with the slow inward (depolarizing) current in excitable tissue. It causes excitation-contraction uncoupling in various myocardial tissues without changes in the configuration of the action potential. Diltiazem produces relaxation of coronary vascular smooth muscle and dilation of both large and small coronary arteries at drug levels which cause little or no negative inotropic effect. The resultant increases in coronary blood flow (epicardial and subendocardial) occur in ischemic and nonischemic models and are accompanied by dose-dependent decreases in systemic blood pressure and decreases in peripheral resistance.

Hemodynamic and Electrophysiologic Effects. Like other calcium antagonists, diltiazem decreases sinoatrial and atrioventricular conduction in isolated tissues and has a negative inotropic effect in isolated preparations. In the intact animal, prolongation of the AH interval can be seen at higher doses.

In man, diltiazem prevents spontaneous and ergonovine-provoked coronary artery spasm. It causes a decrease in peripheral vascular resistance and a modest fall in blood pressure and, in exercise tolerance studies in patients with ischemic heart disease, reduces the heart rate-blood pressure product for any given work load. Studies to date, primarily in patients with good ventricular function, have not revealed evidence of a negative inotropic effect; cardiac output, ejection fraction, and left ventricular end diastolic pressure have not been affected. There are as yet few data on the interaction of diltiazem and beta-blockers. Resting heart rate is usually unchanged or slightly reduced by diltiazem.

Intravenous diltiazem in doses of 20 mg prolongs AH conduction time and AV node functional and effective refractory periods approximately 20%. In a study involving single oral doses of 300 mg of CARDIZEM in six normal volunteers, the average maximum PR prolongation was 14% with no instances of greater than first-degree AV block. Diltiazem-associated prolongation of the AH interval is not more pronounced in patients with first-degree heart block. In patients with sick sinus syndrome, diltiazem significantly prolongs sinus cycle length (up to 50% in some cases).

Chronic oral administration of CARDIZEM in doses of up to 240 mg/day has resulted in small increases in PR interval, but has not usually produced abnormal prolongation. There were, however, three instances of second-degree AV block and one instance of third-degree AV block in a group of 959 chronically treated patients.

Pharmacokinetics and Metabolism. Diltiazem is absorbed from the tablet formulation to about 80% of a reference capsule and is subject to an extensive first-pass effect, giving an absolute bioavailability (compared to intravenous dosing) of about 40%. CARDIZEM undergoes extensive hepatic metabolism in which 2% to 4% of the unchanged drug appears in the urine. In vitro binding studies show CARDIZEM is 70% to 80% bound to plasma proteins. Competitive ligand binding studies have also shown CARDIZEM binding is not altered by therapeutic concentrations of digoxin, hydrochlorothiazide, phenylbutazone, propranolol, salicylic acid, or warfarin. Single oral doses of 30 to 120 mg of CARDIZEM result in detectable plasma levels within 30 to 60 minutes and peak plasma levels two to three hours after drug administration. The plasma elimination half-life following single or multiple drug administration is approximately 3.5 hours. Desacetyl diltiazem is also present in the plasma at levels of 10% to 20% of the parent drug and is 25% to 50% as potent a coronary vasodilator as diltiazem. Therapeutic blood levels of CARDIZEM appear to be in the range of 50 to 200 ng/ml. There is a departure from dose-linearity when single doses above 60 mg are given; a 120-mg dose gave blood levels three times that of the 60-mg dose. There is no information about the effect of renal or hepatic impairment on excretion or metabolism of diltiazem.

INDICATIONS AND USAGE

1. **Angina Pectoris Due to Coronary Artery Spasm.** CARDIZEM is indicated in the treatment of angina pectoris due to coronary artery spasm. CARDIZEM has been shown effective in the treatment of spontaneous coronary artery spasm presenting as Prinzmetal's variant angina (resting angina with ST-segment elevation occurring during attacks).
2. **Chronic Stable Angina (Classic Effort-Associated Angina).** CARDIZEM is indicated in the management of chronic stable angina. CARDIZEM has been effective in controlled trials in reducing angina frequency and increasing exercise tolerance.

There are no controlled studies of the effectiveness of the concomitant use of diltiazem and beta-blockers or of the safety of this combination in patients with impaired ventricular function or conduction abnormalities.

CONTRAINDICATIONS

CARDIZEM is contraindicated in (1) patients with sick sinus syndrome except in the presence of a functioning ventricular pacemaker, (2) patients with second- or third-degree AV block except in the presence of a functioning ventricular pacemaker, and (3) patients with hypotension (less than 90 mm Hg systolic).

WARNINGS

1. **Cardiac Conduction.** CARDIZEM prolongs AV node refractory periods without significantly prolonging sinus node recovery time, except in patients with sick sinus syndrome. This effect may rarely result in abnormally slow heart rates (particularly in patients with sick sinus syndrome) or second- or third-degree AV block (six of 1243 patients for 0.48%). Concomitant use of diltiazem with beta-blockers or digitalis may result in additive effects on cardiac conduction. A patient with Prinzmetal's angina developed periods of asystole (2 to 5 seconds) after a single dose of 60 mg of diltiazem.
2. **Congestive Heart Failure.** Although diltiazem has a negative inotropic effect in isolated animal tissue preparations, hemodynamic studies in humans with normal ventricular function have not shown a reduction in cardiac index nor consistent negative effects on contractility (dp/dt). Experience with the use of CARDIZEM alone or in combination with beta-blockers in patients with impaired ventricular function is very limited. Caution should be exercised when using the drug in such patients.
3. **Hypotension.** Decreases in blood pressure associated with CARDIZEM therapy may occasionally result in symptomatic hypotension.
4. **Acute Hepatic Injury.** In rare instances, patients receiving CARDIZEM have exhibited reversible acute hepatic injury as evidenced by moderate to extreme elevations of liver enzymes. (See PRECAUTIONS and ADVERSE REACTIONS.)

PRECAUTIONS

General. CARDIZEM (diltiazem hydrochloride) is extensively metabolized by the liver and excreted by the kidneys and in bile. As with any new drug given over prolonged periods, laboratory parameters should be monitored at regular intervals. The drug should be used with caution in patients with impaired renal or hepatic function. In subacute and chronic dog and rat studies designed to produce toxicity, high doses of diltiazem were associated with hepatic damage. In special subacute hepatic studies, oral doses of 125 mg/kg and higher in rats were associated with histological changes in the liver which were reversible when the drug was discontinued. In dogs, doses of 20 mg/kg were also associated with hepatic changes; however, these changes were reversible with continued dosing.

Drug Interaction. Pharmacologic studies indicate that there may be additive effects in prolonging AV conduction when using beta-blockers or digitalis concomitantly with CARDIZEM. (See WARNINGS).

Controlled and uncontrolled domestic studies suggest that concomitant use of CARDIZEM and beta-blockers or digitalis is usually well tolerated. Available data are not sufficient, however, to predict the effects of concomitant treatment, particularly in patients with left ventricular dysfunction or cardiac conduction abnormalities. In healthy volunteers, diltiazem has been shown to increase serum digoxin levels up to 20%.

Carcinogenesis, Mutagenesis, Impairment of Fertility. A 24-month study in rats and a 21-month study in mice showed no evidence of carcinogenicity. There was also no mutagenic response in in vitro bacterial tests. No intrinsic effect on fertility was observed in rats.

Pregnancy. Category C. Reproduction studies have been conducted in mice, rats, and rabbits. Administration of doses ranging from five to ten times greater (on a mg/kg basis) than the daily recommended therapeutic dose has resulted in embryo and fetal lethality. These doses, in some studies, have been reported to cause skeletal abnormalities. In the perinatal/postnatal studies, there was some reduction in early individual pup weights and survival rates. There was an increased incidence of stillbirths at doses of 20 times the human dose or greater.

There are no well-controlled studies in pregnant women; therefore, use CARDIZEM in pregnant women only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers. It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, exercise caution when CARDIZEM is administered to a nursing woman if the drug's benefits are thought to outweigh its potential risks in this situation.

Pediatric Use. Safety and effectiveness in children have not been established.

ADVERSE REACTIONS

Serious adverse reactions have been rare in studies carried out to date, but it should be recognized that patients with impaired ventricular function and cardiac conduction abnormalities have usually been excluded.

In domestic placebo-controlled trials, the incidence of adverse reactions reported during CARDIZEM therapy was not greater than that reported during placebo therapy.

The following represent occurrences observed in clinical studies which can be at least reasonably associated with the pharmacology of calcium influx inhibition. In many cases, the relationship to CARDIZEM has not been established. The most common occurrences, as well as their frequency of presentation, are: edema (2.4%), headache (2.1%), nausea (1.9%), dizziness (1.5%), rash (1.3%), asthenia (1.2%), AV block (1.1%). In addition, the following events were reported infrequently (less than 1%) with the order of presentation corresponding to the relative frequency of occurrence.

Cardiovascular:	Flushing, arrhythmia, hypotension, bradycardia, palpitations, congestive heart failure, syncope.
Nervous System:	Paresthesia, nervousness, somnolence, tremor, insomnia, hallucinations, and amnesia.
Gastrointestinal:	Constipation, dyspepsia, diarrhea, vomiting, mild elevations of alkaline phosphatase, SGOT, SGPT, and LDH.
Dermatologic:	Pruritus, petechiae, urticaria, photosensitivity.
Other:	Polyuria, nocturia.

The following additional experiences have been noted:

A patient with Prinzmetal's angina experiencing episodes of vasospastic angina developed periods of transient asymptomatic asystole approximately five hours after receiving a single 60-mg dose of CARDIZEM.

The following postmarketing events have been reported infrequently in patients receiving CARDIZEM: erythema multiforme; leukopenia; and extreme elevations of alkaline phosphatase, SGOT, SGPT, LDH, and CPK. However, a definitive cause and effect between these events and CARDIZEM therapy is yet to be established.

OVERDOSAGE OR EXAGGERATED RESPONSE

Overdosage experience with oral diltiazem has been limited. Single oral doses of 300 mg of CARDIZEM have been well tolerated by healthy volunteers. In the event of overdosage or exaggerated response, appropriate supportive measures should be employed in addition to gastric lavage. The following measures may be considered:

Bradycardia	Administer atropine (0.60 to 1.0 mg). If there is no response to vagal blockade, administer isoproterenol cautiously.
High-Degree AV Block	Treat as for bradycardia above. Fixed high-degree AV block should be treated with cardiac pacing.
Cardiac Failure	Administer inotropic agents (isoproterenol, dopamine, or dobutamine) and diuretics.
Hypotension	Vasopressors (eg, dopamine or levarterenol bitartrate).

Actual treatment and dosage should depend on the severity of the clinical situation and the judgment and experience of the treating physician.

The oral LD_{50}'s in mice and rats range from 415 to 740 mg/kg and from 560 to 810 mg/kg, respectively. The intravenous LD_{50}'s in these species were 60 and 38 mg/kg, respectively. The oral LD_{50} in dogs is considered to be in excess of 50 mg/kg, while lethality was seen in monkeys at 360 mg/kg. The toxic dose in man is not known, but blood levels in excess of 800 ng/ml have not been associated with toxicity.

DOSAGE AND ADMINISTRATION

Exertional Angina Pectoris Due to Atherosclerotic Coronary Artery Disease or Angina Pectoris at Rest Due to Coronary Artery Spasm. Dosage must be adjusted to each patient's needs. Starting with 30 mg four times daily, before meals and at bedtime, dosage should be increased gradually (given in divided doses three or four times daily) at one- to two-day intervals until optimum response is obtained. Although individual patients may respond to any dosage level, the average optimum dosage range appears to be 180 to 240 mg/day. There are no available data concerning dosage requirements in patients with impaired renal or hepatic function. If the drug must be used in such patients, titration should be carried out with particular caution.

Concomitant Use With Other Antianginal Agents:

1. **Sublingual NTG** may be taken as required to abort acute anginal attacks during CARDIZEM therapy.
2. **Prophylactic Nitrate Therapy**—CARDIZEM may be safely coadministered with short- and long-acting nitrates, but there have been no controlled studies to evaluate the antianginal effectiveness of this combination.
3. **Beta-blockers.** (See WARNINGS and PRECAUTIONS.)

HOW SUPPLIED

Cardizem 30-mg tablets are supplied in bottles of 100 (NDC 0088-1771-47) and in Unit Dose Identification Paks of 100 (NDC 0088-1771-49). Each green tablet is engraved with MARION on one side and 1771 engraved on the other. CARDIZEM 60-mg scored tablets are supplied in bottles of 100 (NDC 0088-1772-47) and in Unit Dose Identification Paks of 100 (NDC 0088-1772-49). Each yellow tablet is engraved with MARION on one side and 1772 on the other.

Issued 4/1/84

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MAG's 1986 Leadership Conference

• The Professional Liability Crisis
• New Perspectives on the Medical Marketplace

FOR THE LAST 3 years, the Medical Association of Georgia's annual Leadership Conference has informed Georgia doctors about the latest, most pressing issues of medical socio-economics. Next February, maintaining this tradition, the 1986 MAG Leadership Conference will address one of the most critical topics facing physicians today: *professional liability*.

Virtually every physician in America — and much of the general public — is aware of the medical liability insurance crisis. What physicians and the general public *need to know* is that the liability problem extends beyond the medical community. City governments, day care centers, asbestos companies — all are facing what *USA Today* has recently called "a massive national liability insurance crunch."

In addition to professional liability, as our members are well aware, this past year the MAG has undertaken the establishment of an IPA-HMO in Georgia. We have achieved significant success already in our endeavors, and have much to report to our membership. We have therefore scheduled an afternoon session on "New Perspectives on the Medical Marketplace" during the first day of our Conference.

Registration For The Meeting

All Georgia physicians are invited to attend the 1986 MAG Leadership Conference. MAG Members and Auxilians are especially urged to participate in this vital meeting.

To register, please complete the registration form inserted in this *Journal*, detach it from the hotel registration form, and mail it with your registration fee to the MAG Office.

Registration Fee

	MAG Member	*Non Member*
Physician	$50	$150
Resident Physician	no charge	$ 15
Auxiliary/Spouse	no charge	$ 15
medical society executive	no charge	

NOTE: Members of the Georgia Osteopathic Association and the Georgia Dental Association are invited to attend our 1986 Leadership Conference. Registration fee is $50.

Mr. Davis is MAG's Director of Education.

Hotel Reservations

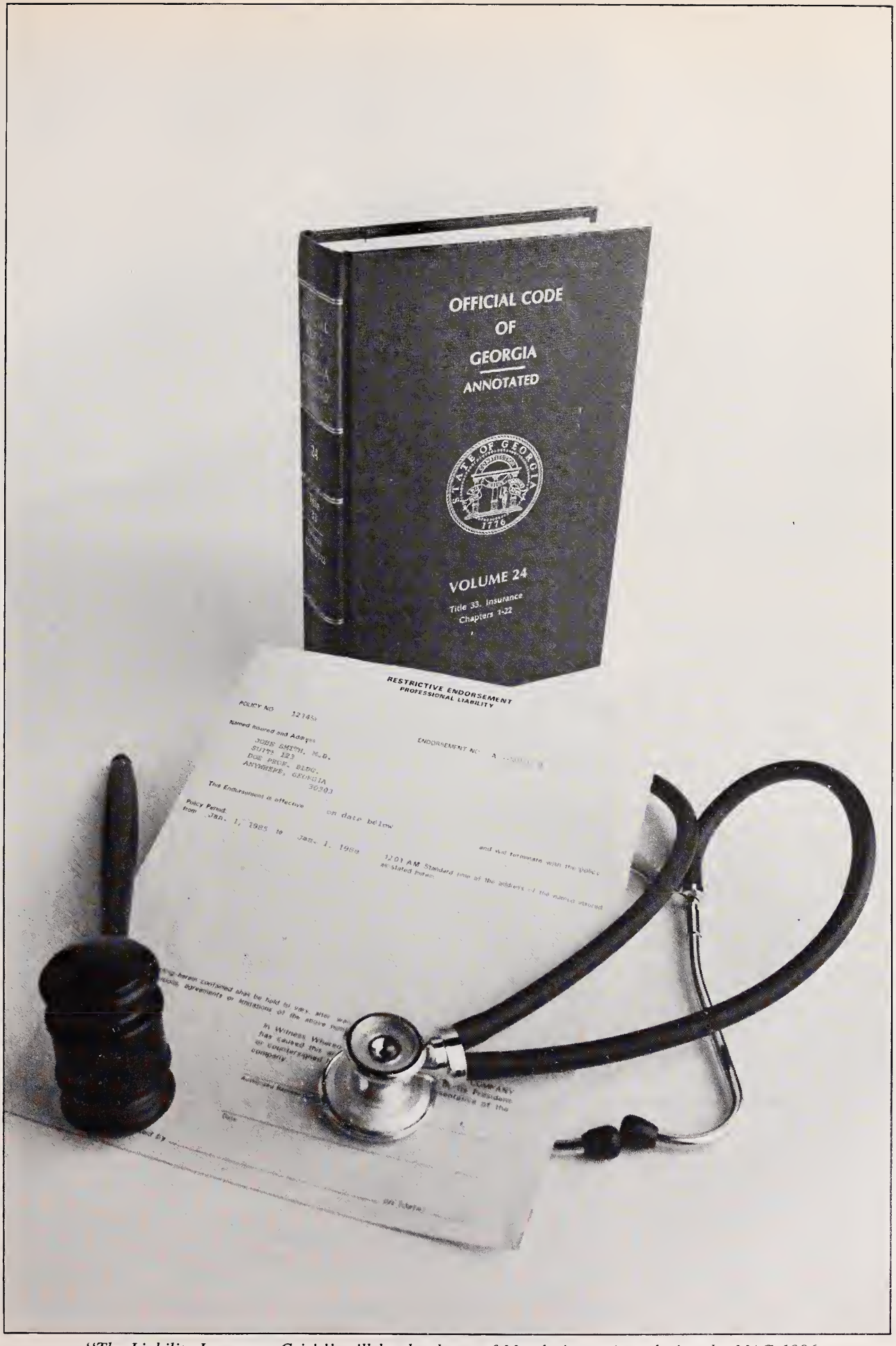
If you wish hotel accommodations at the Hyatt Regency, please detach and complete the bottom portion of the registration form and mail it directly to the Hyatt Regency Atlanta Hotel by January 2, 1986.

Conference Highlights

Our complete program for the 1986 MAG Leadership Conference is on the following page. Here are highlights:

Sunday afternoon, February 2 (2:00-5:00 p.m.)
"New Perspectives on the Medical Marketplace"

Opening speaker for Sunday's portion of the Leadership Congerence is Boyd Thompson, who has just retired as Executive Vice President of the American Medical Care and Review Association in Washington. His presentation, "Alternative Delivery Sys-



"The Liability Insurance Crisis" will be the theme of Monday's sessions during the MAG 1986 Leadership Conference, February 2-4. Sunday's afternoon session will address "New Perspectives on the Medical Marketplace."

tems: Their Status Across the Nation,'' will review the recent rise in health maintenance organizations. Following him will be Cynthia Szal, Associate Director of Consumer and Professional Relations for the Health Insurance Association of America in Washington, who will add another new perspective on the medical marketplace, that of utilization management programs.

Atlanta internist Louis H. Felder, M.D., will bring the focus closer to home with his examination of the growth of alternative delivery systems in Georgia. Winding up the afternoon will be a report on MAG's IPA-HMO initiative — our achievements and our future prospects.

Monday, February 3 (10:00 a.m.-4:30 p.m. with reception 6:00-7:30 p.m.)
The Challenge of Professional Liability

All day on Monday our attention will be turned to the liability insurance crisis. We are honored to have as our opening speaker in the morning the Honorable Warren Evans, Commissioner of Insurance for the State of Georgia. Next, Robert E. Carpenter, President of Cotton States Insurance Companies, will speak on the crisis in Georgia from the viewpoint of the insurance company.

A key point in MAG's efforts to educate the public about the professional liability crisis involves the way in which the insurance industry handles rating and reserves. We've therefore secured Mr. Dan Champlin, Assistant Deputy Insurance Commissioner, to address this topic. Just before lunch we'll conclude our morning session with ''Civil Justice Reform'' — a call for reexamination of the ways in which our court system handles liability claims.

As a special feature for spouses, the Auxiliary to the MAG has planned a luncheon and fashion show by Neiman-Marcus during Monday's lunch break. Tickets, at $20 each, are limited. Auxilians are urged to make their reservations by marking the registration form in this issue of the *Journal*.

After lunch we draw attention to the legislative proposals which we in-

MAG LEADERSHIP CONFERENCE PROGRAM

In both our IPA-HMO and liability insurance activities, the MAG is seeking to exert immense impact on the climate in which medical care is delivered in our state.

February 2-4, 1986
Hyatt Regency Hotel
Atlanta

SUNDAY, FEBRUARY 2
NEW PERSPECTIVES ON THE MEDICAL MARKETPLACE

2:00-2:10 p.m.	Welcome Introduction to Sunday's Agenda . . . Dr. Logan Introduction to Monday's Agenda . . . Rusty Kidd
2:10-2:30	Alternative Delivery Systems: Their Status Across the U.S. Boyd D. Thompson, Former Executive Vice President American Medical Care and Review Association Washington
2:30-3:00	Utilization Management Programs: Their Impact on the Practicing Physician Cynthia Szal, Associate Director Health Insurance Association of America
3:00-3:30	Break
3:30-4:00	Growth of Alternative Delivery Systems in Georgia Louis H. Felder, M.D.
4:00-5:00	The MAG IPA: Prospects for the Future S. William Clark, Jr., M.D., Moderator • Report on Participation • Marketing Report • Report of the Chairman of the Board
5:00	Adjourn

MONDAY, FEBRUARY 3
THE LIABILITY INSURANCE CRISIS

10:00-10:05 a.m.	Welcome — Dr. Logan Introduction to the Day's Activities . . . Rusty Kidd
10:10-10:35	The Perspective of the Insurance Commissioner The Hon. Warren Evans, Georgia Commissioner of Insurance
10:35-11:00	The Crisis in Georgia Robert E. Carpenter, President, Cotton States Insurance Companies
11:00-11:45	The High Cost of Writing Insurance
11:00	• Setting Liability Insurance Rates in Georgia Dan Champlin — Assistant Deputy Insurance Commissioner
11:20	• The Issue of Insurance Reserves
11:45-12:15	Civil Justice Reform — The Call to Action
12:15-1:30	Lunch Break
1:30-4:30	Plans for Legislative Relief Moderator: James A. Kaufmann, M.D.
1:30	• What Our Legislation Will Achieve — Rusty Kidd
2:00	• The Insurance Company's Perspective — Charles Hollis, Jr., MD
2:20	• The Reinsuror's Perspective — Lloyd's of London
2:40	• A State Legislator's Perspective
3:00	• A Medical Lobbyist's Perspective Donald S. Fraser, Jr., Director of Legislative Activities, Florida Medical Association
3:20	• Panel Discussion
4:30	Adjourn
6:00-7:30	Reception for Physicians & Their Legislators

TUESDAY, FEBRUARY 4

8:00-9:00 a.m.	Continental Breakfast
9:00	Depart for Capitol
1:00	Check-out for Hyatt guests

tend to introduce into the 1986 Georgia General Assembly. Rusty Kidd, MAG's Director of Legislative Affairs, will explain the details of the bill. Following him will be presentation of different perspectives on the legislation by Charles D. Hollis, Jr., M.D., President of MAG Mutual Insurance Company; a representative of Lloyd's, the reinsurors from London; a Georgia state legislator; and a neighboring state medical association's lobbyist who has worked on professional liability. A panel of these speakers will field questions and guide discussion from the audience.

On Monday evening, all Leadership Conference attendees — physicians, spouses and guests — are invited to attend our Leadership Conference reception at the Hyatt Regency Hotel, from 6:00 to 7:30 p.m.

Tuesday, February 4 (8:00 a.m.-1:00 p.m.)

A special feature of our Leadership Conference will be our arrangement for physicians to visit the State Capitol and to meet with their legislators on the subject of liability insurance. Transportation from the Hyatt to the Capitol will be scheduled around nine o'clock, with return to the hotel in time for guest room check-out.

A Final Word On The Importance Of This Meeting

Never before has the Medical Association of Georgia demonstrated so convincingly its determination to advance the interests of our membership. In both our IPA-HMO and professional liability reform activities, the MAG is seeking to exert immense impact on the climate in which medical care is delivered in our state.

We can succeed in advancing those interests only if we have the sustained commitment of every physician in the organization. In the legislative area, Georgia doctors must demonstrate to the public and our elected representatives that we are determined to help Georgians achieve relief from the critical problems of the liability crisis. Your attendance and active participation at our upcoming Leadership Conference are therefore vital. We need you — join us at the Hyatt in February!

Georgia's Medical Liability Climate

Charles D. Hollis, Jr., M.D., and Jeffrey T. Nugent, M.D.

Its effect on the cost of and access to medical care.

"Results of a statewide survey are presented which reveal how escalating problems and the rising frequency of liability claims are affecting the cost of and access to medical care."

Rapidly increasing liability insurance premiums and the growing number of lawsuits are causing deep concern throughout Georgia's medical community. The impact that the medical liability climate is having on the practice of medicine could have serious implications on the availability and quality of health care in this state. How are physicians reacting?

The Medical Association of Georgia conducted a statewide physician survey this fall which explored how escalating premiums and the rising frequency of liability claims are affecting the cost of and access to medical care. Survey results were cross-referenced by specialty, practice location, and whether the physician was ever named in a liability claim or suit.

Of the 2,200 physicians who responded, the specialty breakdown is as follows:

General, Family, and Internal Medicine	24.5%
Radiology, Dermatology, Urology, Ophthalmology, Otorhinolaryngology, and Oncology	18.4%
Obstetrics/Gynecology	12.3%
General & Plastic Surgery	11.5%
Pathology, Psychiatry, Neurology, Geriatrics, and Infectious Diseases	9.1%
Pediatrics	6.7%
Orthopedics	5.5%
Anesthesiology	5.1%
Cardio/Vascular/ Thoracic Surgery	2.1%
Neurosurgery	1.4%
Emergency Medicine	1.1%
Other/No Answer	2.3%

The respondents were asked whether they had ever been named in a professional liability claim or suit, in order to determine how actual involvement in the litigation process might affect a physician's practice of medicine. Nearly 40% of the survey respondents reported they had been named in a liability claim or suit.

The percentage of claims or suits within certain specialties is even more significant. A total of 57.2% of the OB/GYNs who responded had been named in a liability claim or suit. Similarly, 52.2% of the general and plastic surgeons, 60.5% of the orthopedists, 60.9% of the cardio/vascular/thoracic surgeons, and 74.2% of the neurosurgeons who responded to the survey had been named in a liability claim or suit.

Of the *total* survey respondents, nearly 62% said the experience caused them to alter their practice of medicine. In what way? Primarily by increasing their practice of "defensive medicine."

Table 1: Actions Taken By Physicians Practicing Defensive Medicine

Action	All Respondents	Respondents Named in Claim/Suit	SPECIALTIES FP, GP, IM	OB/GYN	Surgery	Radiol. Etc.	Orthopedics
1. Order additional tests	54.3%	76.4%	81.4%	78.6%	76.5%	70.1%	87.8%
2. Discontinued certain procedures	29.2%	29.4%	33.9%	20.4%	45.7%	28.9%	34.7%
3. Limit practice	16.8%	16.5%	25.4%	18.4%	18.5%	13.4%	18.4%

PRACTICING DEFENSIVE MEDICINE

As Table 1 indicates, there are three key "defensive measures" many Georgia physicians are taking in reaction to liability claims or the possibility of one. The approaches the survey respondents have been most likely to use are, (1) ordering additional tests, (2) discontinuing procedures, and (3) limiting the number or type of procedures performed.

Ordering Additional Tests

Although ordering additional tests is a costly defensive measure and one which takes medical care further than most physicians feel is necessary, over half the survey respondents (54.3%) do so because of the medical liability climate. A potentially damaging court room scenario is evidently a persuasive image for a majority of Georgia doctors.

Discontinuing Certain Procedures

Overall comments by physicians who chose to discontinue certain procedures due to the liability climate (29.2%) indicate a severe frustration over their decision. This issue is particularly sensitive and even awkward for many physicians because their primary function, providing care for patients, has been compromised. The most vivid example of a discontinued procedure can be seen among obstetricians, in which 19% of the survey respondents have totally stopped delivering babies. If one considers other specialties such as family or general medicine which include obstetrics, the figure jumps to almost 35% of the physician respondents who have stopped delivering altogether.

Nearly 40% of the respondents reported that they had been named in a liability claim or suit.

Among obstetricians and others who have discontinued obstetrics, 66% cited the cause as cost of liability insurance and/or the threat of a lawsuit. Throughout all the specialties, over one fourth of the physicians who have discontinued various procedures indicated the cost of liability insurance and/or the threat of a lawsuit as the reason.

Limiting Practice

One in six physicians (16.8%) across the state has felt the need to limit certain areas of his or her practice in the past 3 years as a direct result of the liability climate. Of total physician respondents, 7.5% now perform only selected orthopedic procedures; 17.5% have limited surgical procedures; 5.9% provide only selected diagnostic procedures; and 6.1% now offer limited obstetrical care.

Once again, when these physicians are classified within their specialties, the results are much more revealing. For instance, among orthopedists and others who include orthopedic-related procedures in their practices, over 65% of the respondents have limited the number and scope of the orthopedic procedures they perform. Among obstetricians and others who practice obstetrics, 19% of the respondents have limited their practice to only selected obstetrical care. Add this to the number of physician respondents who said they had ceased doing obstetrics altogether, and the result is an alarming 54%.

In addition to the physicians who have actually discontinued procedures or limited their practice, there are a growing number of physicians who have seriously

considered doing so, primarily due to the medico-legal climate. Of these respondents, 16.3% cited the cost of professional liability insurance, and 15.6% credited the threat of a lawsuit. The fact that increasing numbers of physicians are becoming, or considering becoming, inaccessible for certain procedures warrants serious attention.

TREATMENT OF INDIGENTS

When Georgia doctors were asked if they had discontinued or limited treatment of indigent patients in the last 3 years, almost one in five of the physician respondents said they had. The reasons most given were the threat of a lawsuit (65.6%) and cost of liability insurance (46.3%). All of the neurosurgeon respondents who had discontinued or limited indigent care (25%) credited threat of a lawsuit as the primary reason.

In addition, nearly one fourth of the respondents have seriously considered discontinuing or limiting their treatment of indigents. Why? A total of 72.7% cited the threat of a lawsuit, and 55.1% indicated the cost of liability insurance.

COST

When asked if they thought the cost of health care to their patients had increased in the past 3 years due to the medico-legal climate, 73.3% of the physicians who replied said yes. When asked if they had increased their fees in the past 3 years, 69.8% of the total respondents said yes. The majority of these respondents (61%) said they had raised fees between 1% and 20%. However, when these physicians were asked if they passed along the entire increases in the cost of liability premiums to patients, the majority of physician respondents said no. Most indicated only 20% or less of their entire premium increases were passed along to patients. It therefore appears that, for now, Georgia physicians are absorbing the dramatic premium increases of recent times. Yet one question remains: How much longer can we continue to do this?

Finally, when asked if effective laws were passed to alleviate the current malpractice climate, would physicians, in turn, lower fees accordingly and/or reinstate discontinued procedures, an overwhelming number of respondents (48.8%) said they would, as opposed to 27.8% who said they would not. A total of 23.5% of the physician respondents either gave "possibly" as an answer or did not respond.

DEMOGRAPHICS

When we compared demographic areas, an important discovery was made which may indicate a serious problem for communities in the southern part of our state. More physician respondents in south Georgia have discontinued all obstetrical care (9.1%), selected surgical procedures (19.0%), selected orthopedic procedures (11.2%), and selected obstetrical care (5.3%) than in the other areas of the state.

Additional demographic review shows that this survey was truly a statewide poll: 47% of the respondents practice in north Georgia (which includes Atlanta), 29.2% practice in middle Georgia, and 20.3% practice in south Georgia. Divided by community size, 8.2% practice in areas of population 10,000 or less; 22.6% practice in areas of 11-50,000; 20.9% practice in areas of 51,000-150,000; and, 46.0% practice in areas of 151,000 or more. The majority of the physicians who responded were between 36 and 55 years of age. Almost one-half (45.7%) of the sample are in solo practice, with another 22% in a partnership or other type of non-group arrangement.

SUMMARY

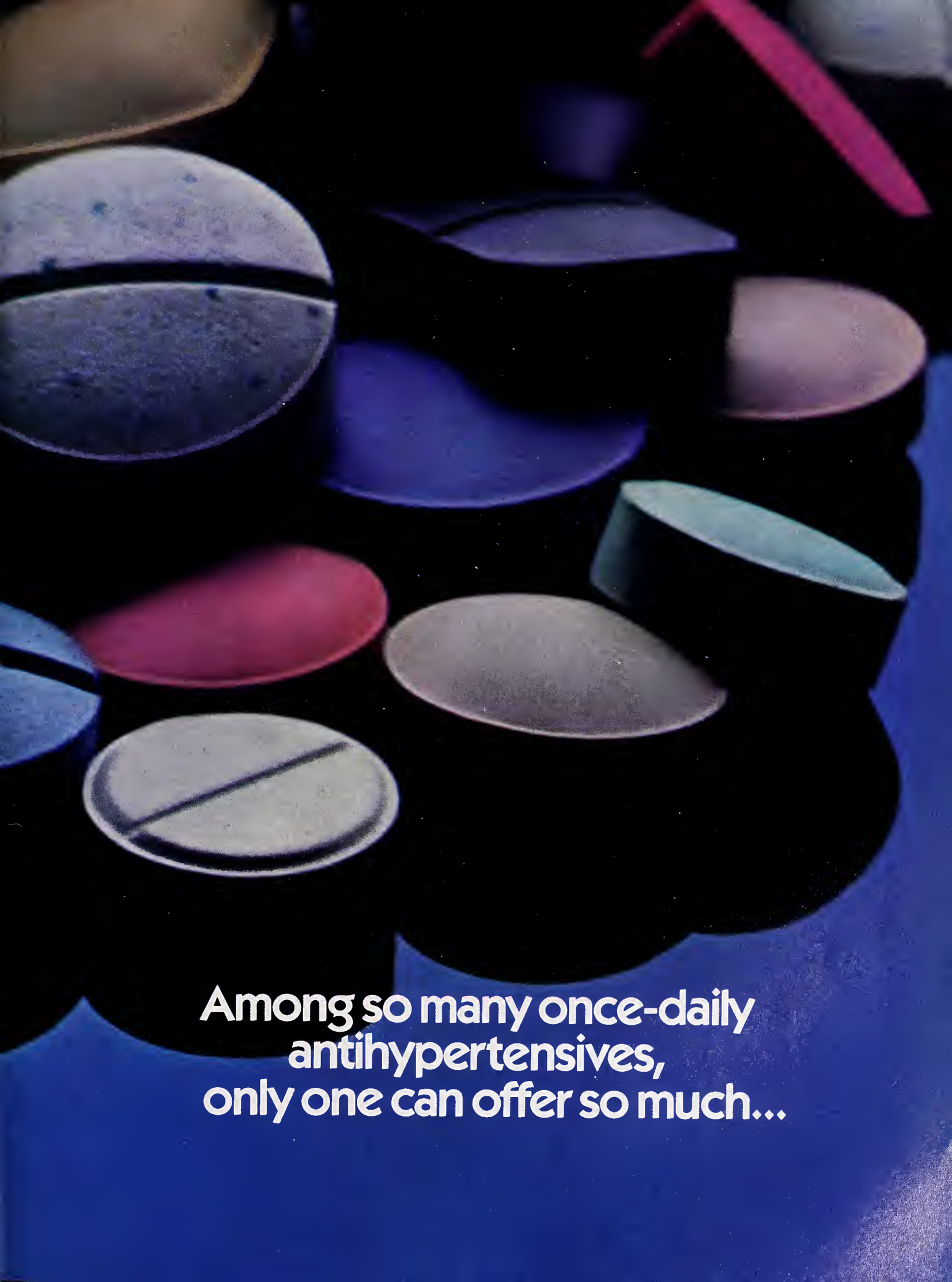
Clearly, the medico-legal climate is having a profound impact on medicine in Georgia. Access to health care is being increasingly threatened as physicians discontinue procedures or limit their practices. Defensive medicine via additional testing and other increases is an unfortunate yet substantial addition to the cost of health care. In fact, it is estimated that approximately 30% of the cost of health care is attributable to the liability problem, including the practice of defensive medicine, according to the Governor's Advisory Council on Medical Malpractice and the Metropolitan Atlanta Foundation for Health Care.

Among OBs and others who have discontinued obstetrics, 66% cited the cause as cost of liability insurance and/or threat of a lawsuit; over 25% of *all* physicians who have discontinued various procedures indicated the same cause.

Moreover, when studies suggest that just 25¢-35¢ of a premium dollar reaches the truly injured patient, we can only conclude that something should be and *must* be done. The civil justice system urgently needs improvement before medicine is irrevocably damaged. ■

Dr. Hollis, an internist, is President of MAG Mutual Insurance Company, and Dr. Nugent, an orthopedic surgeon, is Chairman of MAG's Public Relations Committee.

Data Tabulating Service, Inc., was responsible for the compilation of these survey data.


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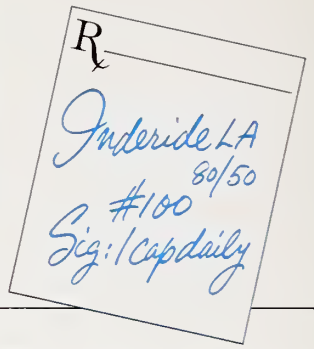
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INDERIDE LA is indicated in the management of hypertension.

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CONTRAINDICATIONS

Propranolol hydrochloride (INDERAL®):
Propranolol is contraindicated in: 1) cardiogenic shock; 2) sinus bradycardia and greater than first degree block; 3) bronchial asthma; 4) congestive heart failure (see WARNINGS) unless the failure is secondary to a tachyarrhythmia treatable with propranolol.

Hydrochlorothiazide:
Hydrochlorothiazide is contraindicated in patients with anuria or hypersensitivity to this or other sulfonamide-derived drugs.

WARNINGS

Propranolol hydrochloride (INDERAL®):
CARDIAC FAILURE: Sympathetic stimulation may be a vital component supporting circulatory function in patients with congestive heart failure, and its inhibition by beta blockade may precipitate more severe failure. Although beta blockers should be avoided in overt congestive heart failure, if necessary, they can be used with close follow-up in patients with a history of failure who are well compensated, and are receiving digitalis and diuretics. Beta-adrenergic blocking agents do not abolish the inotropic action of digitalis on heart muscle.

IN PATIENTS WITHOUT A HISTORY OF HEART FAILURE, continued use of beta blockers can, in some cases, lead to cardiac failure. Therefore, at the first sign or symptom of heart failure, the patient should be digitalized and/or treated with diuretics, and the response observed closely, or propranolol should be discontinued (gradually, if possible).

IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following abrupt discontinuance of propranolol therapy. Therefore, when discontinuance of propranolol is planned, the dosage should be gradually reduced and the patient carefully monitored. In addition, when propranolol is prescribed for angina pectoris, the patients should be cautioned against interruption or cessation of therapy without the physician's advice. If propranolol therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute propranolol therapy and take other measures appropriate for the management of unstable angina pectoris. Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease who are given propranolol for other indications.

THYROTOXICOSIS: Beta blockade may mask certain clinical signs of hyperthyroidism. Therefore, abrupt withdrawal of propranolol may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm. Propranolol does not distort thyroid function tests.

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker. In one case this resulted after an initial dose of 5 mg propranolol.

MAJOR SURGERY: The necessity or desirability of withdrawal of beta-blocking therapy prior to major surgery is controversial. It should be noted, however, that the impaired ability of the heart to respond to reflex adrenergic stimuli may augment the risks of general anesthesia and surgical procedures.

Nonallergic Bronchospasm (eg, chronic bronchitis, emphysema)—PATIENTS WITH BRONCHOSPASTIC DISEASES SHOULD, IN GENERAL, NOT RECEIVE BETA BLOCKERS. INDERAL should be administered with caution since it may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta receptors.

DIABETES AND HYPOGLYCEMIA: Beta-adrenergic blockade may prevent the appearance of certain premonitory signs and symptoms (pulse rate and pressure changes) of acute hypoglycemia in labile insulin-dependent diabetes. In these patients, it may be more difficult to adjust the dosage of insulin. Hypoglycemic attacks may be accompanied by a precipitous elevation of blood pressure.

Hydrochlorothiazide:
Thiazides should be used with caution in severe renal disease. In patients with renal disease, thiazides may precipitate azotemia. In patients with impaired renal function, cumulative effects of the drug may develop.

Thiazides should also be used with caution in patients with impaired hepatic function or progressive liver disease, since minor alterations of fluid and electrolyte balance may precipitate hepatic coma.

Thiazides may add to or potentiate the action of other antihypertensive drugs. Potentiation occurs with ganglionic or peripheral adrenergic-blocking drugs.

Sensitivity reactions may occur in patients with a history of allergy or bronchial asthma.

The possibility of exacerbation or activation of systemic lupus erythematosus has been reported.

PRECAUTIONS

Propranolol hydrochloride (INDERAL®):
GENERAL: Propranolol should be used with caution in patients with impaired hepatic or renal function. Propranolol is not indicated for the treatment of hypertensive emergencies.

Beta-adrenoreceptor blockade can cause reduction of intraocular pressure. Patients should be told that propranolol may interfere with the glaucoma screening test. Withdrawal may lead to a return of increased intraocular pressure.

CLINICAL LABORATORY TESTS: Elevated blood urea levels in patients with severe heart disease, elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase.

DRUG INTERACTIONS: Patients receiving catecholamine-depleting drugs such as reserpine, should be closely observed if propranolol is administered. The added catecholamine-blocking action may produce an excessive reduction of resting sympathetic nervous activity, which may result in hypotension, marked bradycardia, vertigo, syncopal attacks, or orthostatic hypotension.

CARCINOGENESIS, MUTAGENESIS, IMPAIRMENT OF FERTILITY: Long-term studies in animals have been conducted to evaluate toxic effects and carcinogenic potential. In 18-month studies, in both rats and mice, employing doses up to 150 mg/kg/day, there was no evidence of significant drug-induced toxicity. There were no drug-related tumorigenic effects at any of the dosage levels. Reproductive studies in animals did not show any impairment of fertility that was attributable to the drug.

PREGNANCY: Pregnancy Category C. Propranolol has been shown to be embryotoxic in animal studies at doses about 10 times greater than the maximal recommended human dose. There are no adequate and well-controlled studies in pregnant women. Propranolol should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

NURSING MOTHERS: Propranolol is excreted in human milk. Caution should be exercised when propranolol is administered to a nursing mother.

PEDIATRIC USE: Safety and effectiveness in children have not been established.

Hydrochlorothiazide:
GENERAL: Periodic determination of serum electrolytes to detect possible electrolyte imbalance should be performed at appropriate intervals.

All patients receiving thiazide therapy should be observed for clinical signs of fluid or electrolyte imbalance, namely: Hyponatremia, hypochloremic alkalosis, and hypokalemia. Serum and urine electrolyte determinations are particularly important when the patient is vomiting excessively or receiving parenteral fluids. Medication such as digitalis may also influence serum electrolytes. Warning signs irrespective of cause are: Dryness of mouth, thirst, weakness, lethargy, drowsiness, restlessness, muscle pains or cramps, muscular fatigue, hypotension, oliguria, tachycardia, and gastrointestinal disturbances such as nausea and vomiting.

Hypokalemia may develop, especially with brisk diuresis, when severe cirrhosis is present, or during concomitant use of corticosteroids or ACTH.

Interference with adequate oral electrolyte intake will also contribute to hypokalemia. Hypokalemia can sensitize or exaggerate the response of the heart to the toxic effect of digitalis (eg, increased ventricular irritability). Hypokalemia may be avoided or treated by use of potassium supplements, such as foods with a high potassium content.

Any chloride deficit is generally mild and usually does not require specific treatment except under extraordinary circumstances (as in liver or renal disease). Dilutional hyponatremia may occur in edematous patients in hot weather; appropriate therapy is water restriction, rather than administration of salt, except in rare instances when the hyponatremia is life-threatening. In actual salt depletion, appropriate replacement is the therapy of choice.

Hyperuricemia may occur or frank gout may be precipitated in certain patients receiving thiazide therapy.

Insulin requirements in diabetic patients may be increased, decreased, or unchanged. Diabetes mellitus which has been latent may become manifest during thiazide administration.

If progressive renal impairment becomes evident, consider withholding or discontinuing diuretic therapy.

Thiazides may decrease serum PBI levels without signs of thyroid disturbance.

Calcium excretion is decreased by thiazides. Pathologic changes in the parathyroid gland with hypercalcemia and hypophosphatemia have been observed in a few patients on prolonged thiazide therapy. The common complications of hyperparathyroidism, such as renal lithiasis, bone resorption, and peptic ulceration have not been seen. Thiazides should be discontinued before carrying out tests for parathyroid function.

DRUG INTERACTIONS: Thiazide drugs may increase the responsiveness to tubocurarine.

The antihypertensive effects of thiazides may be enhanced in the postsympathectomy patient. Thiazides may decrease arterial responsiveness to norepinephrine. This diminution is not sufficient to preclude effectiveness of the pressor agent for therapeutic use.

PREGNANCY: Pregnancy Category C. Thiazides cross the placental barrier and appear in cord blood. The use of thiazides in pregnancy requires that the anticipated benefit be weighed against possible hazards to the fetus. These hazards include fetal or neonatal jaundice, thrombocytopenia, and possibly other adverse reactions which have occurred in the adult.

NURSING MOTHERS: Thiazides appear in human milk. If use of the drug is deemed essential, the patient should stop nursing.

PEDIATRIC USE: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS

Propranolol hydrochloride (INDERAL®):
Most adverse effects have been mild and transient and have rarely required the withdrawal of therapy.

Cardiovascular: Bradycardia, congestive heart failure; intensification of AV block; hypotension; paresthesia of hands; thrombocytopenic purpura; arterial insufficiency, usually of the Raynaud type.

Central Nervous System: Lightheadedness; mental depression manifested by insomnia, lassitude, weakness, fatigue; reversible mental depression progressing to catatonia; visual disturbances; hallucinations; an acute reversible syndrome characterized by disorientation for time and place, short-term memory loss, emotional lability, slightly clouded sensorium, and decreased performance on neuropsychometrics.

Gastrointestinal: Nausea, vomiting, epigastric distress, abdominal cramping, diarrhea, constipation, mesenteric arterial thrombosis, ischemic colitis.

Allergic: Pharyngitis and agranulocytosis; erythematous rash, fever combined with aching and sore throat; laryngospasm and respiratory distress.

Respiratory: Bronchospasm.

Hematologic: Agranulocytosis; nonthrombocytopenic purpura; thrombocytopenic purpura.

Auto-Immune: In extremely rare instances, systemic lupus erythematosus has been reported.

Miscellaneous: Alopecia; LE-like reactions; psoriasiform rashes; dry eyes; male impotence; and Peyronie's disease have been reported rarely. Oculomucocutaneous reactions involving the skin, serous membranes, and conjunctivae reported for a beta blocker (practolol) have not been associated with propranolol.

Hydrochlorothiazide:
Gastrointestinal: Anorexia, gastric irritation, nausea, vomiting, cramping, diarrhea, constipation; jaundice (intrahepatic cholestatic jaundice); pancreatitis, sialadenitis.

Central Nervous System: Dizziness, vertigo; paresthesias, headache, xanthopsia.

Hematologic: Leukopenia; agranulocytosis; thrombocytopenia, aplastic anemia.

Cardiovascular: Orthostatic hypotension (may be aggravated by alcohol, barbiturates, or narcotics).

Hypersensitivity: Purpura, photosensitivity; rash; urticaria, necrotizing angiitis (vasculitis, cutaneous vasculitis); fever, respiratory distress, including pneumonitis; anaphylactic reactions.

Other: Hyperglycemia, glycosuria, hyperuricemia, muscle spasm; weakness, restlessness; transient blurred vision.

Whenever adverse reactions are moderate or severe, thiazide dosage should be reduced or therapy withdrawn.

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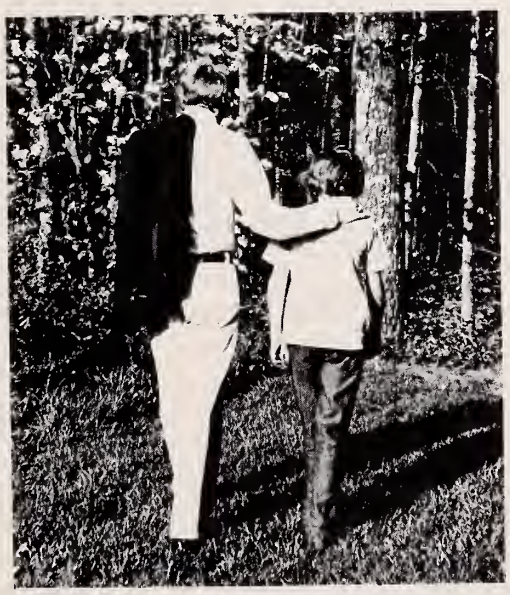
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FATHER HUNGER

ALFRED A. MESSER, M.D.

A discussion of the newest syndrome recognized by child psychiatrists.

Arnold, 24-months old, was brought for evaluation by his mother because of chronic sleep difficulty. His parents had been through a bitter divorce 2 months previously, and his mother retained custody of the boy. He spent 1 afternoon on a Saturday or Sunday each week with his father. Arnold woke up nearly every night, screaming for his father. The mother's attempts to comfort the child failed, and her attention sometimes worsened the situation.

I visited the child and his mother at home and witnessed a night terror episode. Forty-five minutes after he went to bed, the boy stormed into the living room, dazed, screaming, "Daddy, Daddy." His mother tried to comfort him without success. The boy became aware of my presence, calmed down and clung to me. "Daddy hurt, Daddy hurt," he sobbed. "Who hurt Daddy?" I asked. "A big animal. A big black animal."

We reassured him that this was a dream, that his father was not hurt and would visit in 2 days. After more conversation, we put Arnold to bed and he drifted off to sleep. Bewildered by the situation, the mother was chagrined to learn that the sleep problems were related to the absence of his father and the identity he offered the child.

"Father hunger" is the newest syndrome recognized by child psychiatrists. Boys between the ages of 18 to 36 months are referred because of sleep disturbance, characterized by trouble falling asleep, nightmares, and night terrors. The father-hunger syndrome evolves from the abrupt loss of a father during a critical period of gender development and deprives the son of: a) a grown male with whom to identify and a model to learn how to handle aggressive and erotic impulses; b) a feeling of protection and security when he is exposed to threats from the mother; c) emotional support for completion of the separation-individuation phase of development; and d) a role model for learning gender-appropriate social behavior from the father, e.g. standing when urinating.

Any child may suffer sleep disturbance if a nurturing parent leaves abruptly. During the first year of life, sleep tends to be an automatic activity except when illness such as colic or when severe trauma supervenes. As a child enters his second year, attachments to objects become significant. Transient sleep disorders are common and may continue during that entire year, particularly in a child who is excited or frustrated.

The father-hunger syndrome evolves from the abrupt loss of a father during a critical period of gender development. . . .

The tendency toward sleep upset at this age is reflected in the grandmotherly logic not to play vigorously with children before bedtime, or bring out new or different toys just before sleep.

Transient sleep disturbances in the second year of life are very different from night terrors and nightmares characteristic of father hunger. In both states, the child can awaken soon after falling asleep, dazed, with a sense of dread or panic; the mental process of the anxiety or terror state continues during the first moments of wakefulness.

Dr. Messer is a psychiatrist. Send reprint requests to him at 3332 Valley Rd., Atlanta, GA 30305.

Gender Identity

Parents of a newborn girl relate this story: "Our son was 14 months old when his sister was born. One day he watched as she was bathed. As he looked at her naked body, he took both his hands and covered his genitals."

How do we interpret this response? That the boy knows there is a difference between him and his sister. Does he feel she is missing something because of injury or castration? Possibly. When he is threatened with punishment for misbehavior, might he not fantasize that the punishment will involve castration, since he perceives that it has already happened to his sister?

What we can conclude from the event is that children can recognize the difference between maleness and femaleness as early as 14 months of age.

Physical identity as a male and gender role identity evolve in the context of mother, father (or surrogate), and child. Further, as the young boy begins the separation-individuation phase of development, in which he leaves his mother's side and begins to explore outside relationships, having the parent of the opposite sex available in the home promotes this phase of growth.

Case Reports

Arnold, the 24-monther described above, and his mother were seen over several months. In figure drawing and clay modelling the boy expressed themes showing the differences between the sexes, his vulnerability at the hands of an overpowering female, and his comfort and security when lying beside a strong male. The concern about his father being hurt was understood to represent the projection of the boy's own rage at the parent for leaving him. The child's aggressive impulses erupt during sleep and night terror attacks by animals or monsters may represent retaliation for this uncontrollable aggression.

With the mother's permission, Arnold visited his father more frequently and also spent more time with a nearby grandfather. The boy's condition improved, and he continues to grow normally.

Jimmy, 32 months old, was brought for treatment by his mother because of insomnia. When he did sleep, he was awakened by nightmares and would lie in bed, whimpering for his father. He was cranky much of the time and was given to fits of anger, during which he became destructive.

Jimmy's parents had been divorced 3 months. There had been a bitter custody battle over Jimmy, their only child. He lived with his mother; the divorce agreement allowed him to spend every other weekend and special holidays with his father. When the father brought him home on Sunday evenings, Jimmy had to be physically separated from him because he held on so tightly.

The concern about his father being hurt was understood to represent the projection of the boy's own rage at the parent for leaving him.

During several interviews alone, the mother described the bitterness of the separation and her depression over the failure of the marriage. She sometimes exploded with disparaging remarks about her ex-husband, and would say afterwards, "I know I shouldn't say those things and be so bitter, but they just come out. I wish I could take them back, especially when it's in front of Jimmy."

In the playroom, Jimmy rampaged around overturning chairs and throwing dolls underneath tables, all the while glancing at me. He felt comforted when I held him firmly each time and said, "You feel like smashing things, but you and I will get it under control." This boy felt overwhelmed by his aggression and lack of control and was helped when the physician imposed control from the "outside" until he could control his rage from the "inside." His psychic apparatus was not sufficiently developed for him to understand the source of his aggression or manage it at a non-destructive level.

Jimmy typifies the problem of a child exposed to constant battling between parents during marriage. If they separate and the mother continues to explode at the father, the boy is faced with a dilemma. Should his allegiance be to his mother, upon whom he is dependent daily, or to his father, whom he feels has abandoned him and yet with whom he wants to identify?

Treatment in this family involved seeing the parents together, under protestation from both. This was a couple from very traditional backgrounds and very high aspirations. For both, treatment involved working through the sense of failure and depression that accompanied the failed dream of marriage. The parents learned that they could not properly use their child as a battleground to continue their power struggle. Eventually, the mother was able to let the father call and visit more frequently. His sleep problems

began to diminish after both parents began treatment.

Discussion

In the typical family situation, both male and female infants develop a firm attachment to the mothering person during the first months of life. This attachment is reinforced by repetitive feeding and handling, during which the child hears the mother's voice and her breathing. A mental image of the mother is internalized, and the mother perceives the infant to be an extension of herself. Smiles exchanged back and forth solidify these images.

The fulfilling and nurturing mother who fosters the incorporation of these images becomes represented as the "good" mother; the rejecting and aloof mother comes to signify the "bad" mother.

As the child's nervous system develops, the capacity for perception and cognition increases, with curiosity and interest in other persons. The first objects of the child's mental and physical exploration are usually the father and other siblings. (In some contemporary families, the father is the primary caretaker and nurturing person, and this sequence may be reversed.)

Mahler and Goslinger note, "In the second year of life, the infant gradually changes from an almost completely vegetative being, symbiotically dependent upon the mother, into a separate individual. During the second year of life, it is the maturational growth of locomotion which exposes the infant to the important experience of deliberate and active bodily separation from and reunion with the mother, providing he feels his mother's encouragement and availability."[1]

From the tenth to the eighteenth month of age, the child begins to practice for this separation from and reunion with the mother (the practice subphase). A congenial mother who has no trouble "letting go" fosters the child's exploration of the world outside. Poetically, he begins his "love affair with the world."

The separation-individuation phase of development typically runs from 18 to 36 months. The growing infant is struggling to evolve a self-image which he must closely guard "from infringement by the mother and other important figures. . . ."[1] As the third year is reached, the boy's attitude toward his mother changes: more and more he turns to her as an object of romantic and erotic fantasy, and he identifies himself with his father.

However, if the mother is visualized as an annihilating or engulfing person, this rapprochement subphase is interfered with. It is this difficulty with rapprochement that was clear in Jimmy's situation. Mother's wrath toward father, which Jimmy experienced daily, did not allow a comfortable resolution of separation-individuation with rapprochement.

"Staying together for the children's sake" has lately been decried as one of the worst reasons for prolonging a marriage. But when a divorce threatens to break up a young boy's emotional development, the parents might put aside their differences temporarily to provide their child with a crucial need — a father.

Little girls do not have the same problems of gender role formation in the context of mother-child relatedness. The young girl, as the young boy, forms an initial attachment to the mother so that her image is internalized. As her nervous system matures, along with capacities for cognition, separation boundaries between the girl and her mother occur. Now she is ready for involvement with significant others, i.e., the father.

Psychoanalysts have viewed this progression as sequential. How the girl relates to father is dependent on how she has internalized the image of the primary caretaker, i.e., nurturing and "good," or rejecting and "bad." In Freud's (1933) words: "A woman's strong dependence on her father merely takes over the heritage of an equally strong attachment to her mother."[2]

Current studies of early experiences of girls suggests that, rather than being sequential events, the child internalizes images of both parents concurrently, so long as both are emotionally responsive. The young girl, whose first experience with a fathering person is one of availability and nurture, internalizes an image of a "good" man. Later in life, this same image will be projected onto other men, particularly in marriage.

On the other hand, if her image of father is that of a rejecting and unavailable man, she may enter adulthood with unrealistic expectations of men and vacillate in her relationships between deprecation and over-idealization.[3]

In a 1985 study of 39 adolescent girls with anorexia nervosa, 36 reported their fathers absent physically, or when present, cold and aloof. "The father's unavailability to provide feedback regarding her self-worth makes her more sensitive to the negative influences in the culture, such as the drive for thinness, emphasis on weight reduction, appetite control, and the view of emaciation as beautiful."[4]

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Facts About the Liability Crisis

Sherry G. Waronker and Susan L. Nickerson

In light of MAG's efforts to increase awareness of the liability problem in Georgia, the following information has been compiled by MAG and MAG Mutual to assist physicians and others in feeling more comfortable addressing the subject of professional liability.

Is there really a liability crisis?

Yes. Local governments, businesses and individuals from clergymen to physicians throughout the country are facing a liability problem of crisis proportions. According to a November 4, 1985, *Newsweek* article, the nation's insurance climate is so unstable, that the insurance industry is coping by "sharply boosting premiums, canceling individual policies and withdrawing entire lines of insurance" — moves that are "creating serious problems for its customers in the process." Here are some examples of the effects of the unstable insurance climate:

— The average liability premium for cities, towns and counties has grown 150% in one year. In some instances, premiums have risen up to 1200%, with higher deductibles.
— Almost 20% of child care centers have had their policies canceled or not renewed. Premiums have jumped from around $7 up to $70 per child.
— Georgia businesses report that their insurance premiums have increased up to 340% and more.
— Insurance premiums for accounting firms have increased an estimated 125% this year, while coverage limits have been lowered by roughly a third.
— Georgia attorneys are experiencing restrictions on coverage and simultaneous increases in premiums ranging anywhere from 50% to 500%.
— Liability insurance premiums for physicians have more than doubled in the past three years — tripled for some specialties. Even more revealing, about one in five doctors nationwide will be involved in a medical liability claim this year.

What results can be expected from these increased premiums?

The effects are many and far-reaching. For government municipalities, reduced services in areas such as police manpower, road repairs, and firefighting equipment — as well as increased taxes — may be the result.

"The solution to this problem lies in finding less costly ways to settle disputes and dispose of unsubstantiated or unreasonable claims. Reform of the civil justice system is the answer."

In the areas of business, industry, and manufacturing, higher premiums mean higher prices for consumer products and services, or lack of availability of existing products and services. Businesses are being squeezed between demands for more insurance dollars against payroll increases, employee benefits, and the need to charge an adequate yet competitive price for their products.

For child care centers, those that are government-funded may be forced to ask for more public funds or cut back services — a move that many may be unable to afford.

In the area of medical care, increasing numbers of Georgia physicians are discontinuing certain procedures such as obstetrics, selected surgical procedures, and selected orthopedic procedures, partly due to rapidly increasing, unaffordable premiums. It is estimated that approximately 30% of the cost of health care is attributable to the medical liability insurance problem, including the practice of "defensive medicine."

What has occurred to warrant these premium increases and make this liability problem so critical now?

An outbreak in litigation of liability cases.

- — State court filings, nationwide, have reached an unprecedented level of 12 million, or one lawsuit for every 13 adults. Civil suits filed in state courts rose 22% from 1977 to 1981, and appeals increased 32%.
- — Schools and local governments, who until recently were protected against liability claims by the doctrine of sovereign immunity, have been left wide open for lawsuits. Statutes and court rulings have eroded the principle of sovereign immunity and have made it easier for people to seek damages against these entities.
- — 70% of all medical liability suits between 1935 and 1975 were filed after 1970.
- — Federal product liability suits more than doubled from 1978 to 1984, equaling 10,745.
- — In Georgia, half of the 40 known medical liability claim payments (awards and settlements) totaling a quarter of a million dollars and more have occurred in the past year alone.
- — Recent, unanticipated liabilities, such as exposure to asbestos and leaking toxic-waste dumps, have also precipitated an increase in lawsuits.

Besides the actual increase in suits filed, however, other culprits in this liability insurance crisis are: suits found to be unsubstantiated in court, unrealistic awards, long delays, and unpredictable results.

It has been said by some that, despite the statistics, there is no real "insurance crisis" and that liability insurers are actually making more money on their premiums and investment income than they would have those they insure believe. Could this be true?

No. 1984 was the worst financial year *ever* for the insurance industry. According to the Alliance of American Insurers, although many insurance companies did have record investment income, it was not enough to cover their losses. The cost of settling claims exceeded the amount of premium dollars collected, and for medical malpractice in particular, approximately $1.70 was paid out in claims for every $1 collected in premiums. According to *A. M. Best Co.*, an independent source of industry financial data and the financial watchdog of the insurance industry, the nation's property/casualty industry reported a pre-tax operating loss of almost $4 billion in 1984.

What can be done to alleviate this adverse liability climate?

The solution to this problem lies in finding less costly ways to settle disputes and dispose of unsubstantiated or unreasonable claims. Reform of the civil justice system is the answer.

Improvement of the civil justice system is being urged by such noted individuals as Attorney General William French Smith, Chief Justice of the United States Warren E. Burger, Harvard University president and past dean of Harvard Law School Derek Bok, and former Attorney General Griffin Bell. The American Bar Association found in a 5-year study that the nation's legal system is far more expensive than need be. In a recent Gallup poll, a significant portion of the public agreed: our civil justice system is too costly, bogged down with delays and unjustified lawsuits, and is producing awards that are too high.

The Medical Association of Georgia, in conjunction with other professional groups and industries in Georgia, is proposing a five-point agenda of legislative reforms to curtail the liability insurance crisis. One additional measure has been incorporated which calls for stricter investigation, by the State Medical Board, of physicians who have had liability cases resulting in payments.

For 1986, the proposed legislative agenda is:

1. Disclosure of collateral sources of payment
2. Structured settlements
3. Cap on non-economic loss
4. Attorney contingency fee regulation
5. Judicial authority to modify awards
6. Mandatory medical peer review

What do these legislative proposals mean, and how are they beneficial?

1. *Disclosure of collateral sources of payment to plaintiff* —

This recommends that the current rule (which prohibits presentation of any information about compensation a plaintiff may receive for the same injury from other sources) be changed to allow other compensation made or due the plaintiff to be presented so that a jury may make an informed decision as to the defendant's reasonable portion of the injury's value.

An informed jury will be better able to appreciate the economic ramifications of the case and eliminate duplicate payments (''double-dipping''), which the current law allows at the public's expense.

2. *Required structured payment of awards over $100,000* — This recommends that structured, periodic payments be required in all cases where the award exceeds $100,000, with appropriate consideration for immediate economic need.

Structured settlements allow reasonable reimbursement for current expenses, while assuring availability of funds to meet future needs. They help avoid misuse of funds by the plaintiff, as well as undue ''windfalls'' to heirs if the plaintiff dies. Furthermore, significant savings in the cost of the award can result in reduced insurance costs for everyone.

3. *$250,000 limitation on non-economic loss* — This recommends that a limitation or ''cap'' be placed on what a jury may award for non-economic losses, such as pain and suffering, mental anguish, and loss of consortium. This would not pertain to lost wages or medical expenses.

This would allow reasonable restraint of this currently uncontrolled factor that is grossly inflating awards and adversely affecting insurance costs and therefore the consumer with questionable justification. Non-economic losses are a deviation from common law on which this country's legal system was based. Dollar figures for such intangibles are impossible to ascertain, can be manipulated by emotion, and are inherently subject to speculation.

4. *Attorney contingency fee regulation* — This recommends that maximum contingency fees for plaintiffs' attorneys, which presently range from 30% to 50% plus expenses of the total payment to a claimant, be set on the following sliding scale: 33% of the first $150,000; 25% of the next $250,000; and 15% of the balance.

Such a scale insures that the bulk of an award goes as compensation to the injured party, while maintaining fair and reasonable compensation for attorneys. The current contingency fee system bears no relationship to the time, effort, skill or value of services rendered, and encourages attorneys to prolong suits and to pursue astronomical awards in the hope of a ''windfall.''

In a recent Gallup poll, a significant portion of the public agreed (with experts in the field) that our civil justice system is too costly, bogged down with delays and unjustified lawsuits, and is producing awards that are too high.

5. *Judicial authority to modify awards* — This recommends that judges, who currently can only encourage a more reasonable arrangement or order a new trial, be given the authority to modify awards, either to decrease or increase when the awards appear to be excessive or inadequate, and to offer this to the defendant and the plaintiff as an alternative to a new trial.

An experienced trial judge could lend expertise to the formation of a reasonable and equitable award acceptable to all parties involved, and by avoiding a new trial, could minimize legal expenses, insurance rates, societal costs of litigation, and costs to consumers.

6. *Required State Medical Board review of cases resulting in payments above $100,000* — This recommends an addition to current law under which professional liability insurance companies are required to report all judgments or settlements in excess of $10,000; and when two or more settlements or judgments have occurred involving a physician, the insurance companies must report all subsequent payments, regardless of the dollar amount. The addition would be that the Composite State Board of Medical Examiners be *mandated* to investigate the quality of care provided by any physician who has an award or settlement in excess of $100,000 made on his or her behalf, with possible disciplinary action predicated upon the Board's findings.

Investigation by true peers aids in the determination of standard and quality of care. Similarly, strengthening the Board's responsibilities and requirements as set forth by the Legislature will help to improve the quality of health care delivery.

What will happen if this proposed legislative agenda doesn't pass through the Georgia General Assembly?

In the short run, nothing. Ultimately, however, the costs of this liability problem are going to bear down on everyone. With no legislative reform, the situation will just keep getting worse, and everyone will be seeing:

— more rapidly increasing insurance premiums;
— more and more lawsuits;
— people with valid liability suits against cities, businesses,

physicians, lawyers, etc., having more trouble getting into court or settling their cases;
— employers, cities, physicians and others limiting or discontinuing products or services; raising prices, taxes or fees; shutting down operation;
— continued growth in costs of defensive measures.

Increases in insurance premiums represent only a symptom of the underlying problem. While the market is currently chaotic, with dramatic rate hikes, cancellations and non-renewals, it will stabilize. Insurers will simply adjust to the new "norm" that recent experience suggests. This means that premiums and therefore prices will continue to climb unless significant changes are made. *Attention must be focused on the true solution: reform of our civil justice system.*

Ms. Waronker is MAG's Director of Communication and Ms. Nickerson is MAG Mutual's Professional Relations Coordinator.

For more information on the liability problem, contact either one of the authors or Mr. Rusty Kidd, MAG's Director of Legislation.

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GEORGIA MEDICINE TODAY



Munchausen's with a new twist

How do you simulate "asystolic intervals" during Holter monitoring? All it takes is a twist of the wrist, found Drs. C. Craig Mitchell and Martin J. Frank of the Medical College of Georgia.[1] A 24-year-old woman was referred to the cardiology service with ventricular premature beats, atypical chest pain and recurrent syncope. Medication appeared to control the arrhythmia, but repeated periods of monitoring showed frequent episodes of "asystole" with frequent bizarre "escape" beats.

After insertion of a permanent pacemaker, the "asystolic" episodes initially ceased but later recurred. Erratic patient behavior and close examination of the Holter strips suggested that the bradycardia was probably artifactual. While pseudobradycardia can be caused by component malfunction, the evidence pointed to patient tampering. A quick 20-degree rotation of the recording tape reel was found to produce similar ECG patterns.

This was probably the first reported case of apparent patient-induced pseudobradycardia during Holter monitoring, and it resulted in unnecessary insertion of a permanent pacemaker. Seal the record case, suggest Drs. Mitchell and Frank, if you're trying to prevent "electronic Munchausen's syndrome."

Cervical smoke screen

Cigarette smoking is significantly associated with dysplasia and carcinoma *in situ* of the uterine cervix, according to a case-control study headed by Dr. Edwin Trevathan[2] at Emory University. Among women who smoked, the relative risk of cervical cancer rose to 3.6. Even more alarmingly, the relative risk to women with 12 or more pack-years of exposure rose to 12.7. Further, there was evidence that women who began smoking as early teenagers faced even greater risk. It was hypothesized that the cervical mucosa might be exposed to carcinogens in cigarette smoke that are absorbed into the blood and then secreted by the epithelium.

A *JAMA* editorial comments: "As the Surgeon General's report notes, cigarette smoking is the single largest cause of disease and premature death in this country. We can now add cervical cancer to the list of tobacco-caused diseases."[3]

About "herbal" prednisone and indomethacin

Dr. Gary E. Myerson of Atlanta reports a herbal medication called *chuifong toukuwan,* ordered by mail from Hong Kong, that was used by rheumatoid arthritis patients and caused conditions ranging from acute flares, lesions and Cushingoid appearance to arrhythmias and depression.[4] Three samples analyzed at Georgia Tech were found to contain prednisone and indomethacin, and one included a high concentration of lead. As they say in Georgia, *caveat emptor.*

References: 1. Mitchell CC, Frank MJ: *JAMA 248*:469-470, Jul 23/30, 1982. **2.** Trevathan E, *et al*: *JAMA 250*:499-502, Jul 22/29, 1983. **3.** Austin DF: *JAMA 250*:516-517, Jul 22/29, 1983. **4.** Medical News. *JAMA 248*:623, Aug 13, 1982.

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*Feighner JP, *et al: Psychopharmacology 61*:217-225, Mar 22, 1979.

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Warnings: Use with great care in patients with history of urinary retention or angle-closure glaucoma. Severe constipation may occur in patients taking tricyclic antidepressants and anticholinergic-type drugs. Closely supervise cardiovascular patients. (Arrhythmias, sinus tachycardia and prolongation of conduction time reported with use of tricyclic antidepressants, especially high doses. Myocardial infarction and stroke reported with use of this class of drugs.) Caution patients about possible combined effects with alcohol and other CNS depressants and against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving).
Usage in Pregnancy: **Use of minor tranquilizers during the first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**
Since physical and psychological dependence to chlordiazepoxide have been reported rarely, use caution in administering Limbitrol to addiction-prone individuals or those who might increase dosage; withdrawal symptoms following discontinuation of either component alone have been reported (nausea, headache and malaise for amitriptyline; symptoms [including convulsions] similar to those of barbiturate withdrawal for chlordiazepoxide).
Precautions: Use with caution in patients with a history of seizures, in hyperthyroid patients or those on thyroid medication, and in patients with impaired renal or hepatic function. Because of the possibility of suicide in depressed patients, do not permit easy access to large quantities in these patients. Periodic liver function tests and blood counts are recommended during prolonged treatment. Amitriptyline component may block action of guanethidine or similar antihypertensives. Concomitant use with other psychotropic drugs has not been evaluated; sedative effects may be additive. Discontinue several days before surgery. Limit concomitant administration of ECT to essential treatment. See Warnings for precautions about pregnancy. Limbitrol should not be taken during the nursing period. Not recommended in children under 12. In the elderly and debilitated, limit to smallest effective dosage to preclude ataxia, oversedation, confusion or anticholinergic effects.
Adverse Reactions: Most frequently reported are those associated with either component alone: drowsiness, dry mouth, constipation, blurred vision, dizziness and bloating. Less frequently occurring reactions include vivid dreams, impotence, tremor, confusion and nasal congestion. Many depressive symptoms including anorexia, fatigue, weakness, restlessness and lethargy have been reported as side effects of both Limbitrol and amitriptyline. Granulocytopenia, jaundice and hepatic dysfunction have been observed rarely.
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Neurologic: Incoordination, ataxia, numbness, tingling and paresthesias of the extremities, extrapyramidal symptoms, syncope, changes in EEG patterns.
Anticholinergic: Disturbance of accommodation, paralytic ileus, urinary retention, dilatation of urinary tract.
Allergic: Skin rash, urticaria, photosensitization, edema of face and tongue, pruritus.
Hematologic: Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia.
Gastrointestinal: Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, black tongue.
Endocrine: Testicular swelling and gynecomastia in the male, breast enlargement, galactorrhea and minor menstrual irregularities in the female, elevation and lowering of blood sugar levels, and syndrome of inappropriate ADH (antidiuretic hormone) secretion.
Other: Headache, weight gain or loss, increased perspiration, urinary frequency, mydriasis, jaundice, alopecia, parotid swelling.
Overdosage: Immediately hospitalize patient suspected of having taken an overdose. Treatment is symptomatic and supportive. I.V. administration of 1 to 3 mg physostigmine salicylate has been reported to reverse the symptoms of amitriptyline poisoning. See complete product information for manifestation and treatment.
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DRIVING UNDER THE INFLUENCE

CARMEN ALONSO, J.D., AND KENNETH ALONSO, M.D.

A review of the effects of prescription drugs on driving performance.

Driving is a complex task. Deficiency in one skill may lead to a bad result. The consequences of these deficiencies may have enormous cost. Persons given pharmacologic doses of medication on an outpatient basis may experience driving impairment. Because insurers are accelerating the delivery of medical care outside the hospital as a cost savings measure, more and more people find themselves at risk.

Legal entitlement to use of prescription medications is not a defense to the misdemeanor of driving under the influence of alcohol or drugs in Georgia. The incapability of a defendant to form the intent to commit the misdemeanor through voluntary intoxication as a result of reliance on a physician's prescription may be exculpatory, however.

Legal entitlement to use of prescription medicatioins is not a defense to the misdemeanor of driving under the influence of alcohol or drugs in Georgia.[1] The incapability of a defendant to form the intent to commit the misdemeanor through voluntary intoxication as a result of reliance on a physician's prescription may be exculpatory, however.[2]

The administration of psychotropic medications is subject to Georgia law and regulations of informed consent which require disclosure of side effects, risks, and available treatment alternatives.[3] The question of how much disclosure renders the defense of reliance on prescription untenable has not been explored. Civil questions of liability for prescription and notice as well as contributory negligence await exploration in the courts. This paper briefly reviews the effects of medications on driving performance.

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Blood Alcohol Measurements

A person is under the influence of an intoxicant when it appears that it is less safe for such a person to operate a motor vehicle than it would be if he or she were not so affected.[4] Recent data from the National Swedish Road and Traffic Institute show that even a blood alcohol level of 0.04% can lead to impaired performance in emergency situations.5 A similar impairment in the hangover period after comsuming large quantities of alcohol the previous day has been described.[6] In the United States, the Federal Aviation Administration has recently published regulations setting a blood alcohol level of 0.04% as intoxicated for those who would fly airplanes.[7]

Impairment From Drugs, Alone and in Combination

Marijuana, smoked in doses used "socially," is associated with significant deterioration in simulated instrument flying performance within 30 minutes. The effects peak at 2 hours and are generally gone within 4 hours. Present FAA regulations already prohibit the use of this substance. Its effects on driving performance are quite variable, however, with significant impairment seen at high doses and with chronic use.[9, 10] Marijuana (or its active metabolites) is available in limited quantity for therapeutic use by outpatients.

An acute dose of alcohol dramatically impairs human psychomotor performance.[11] The absorption

of many drugs is enhanced with concomitant alcohol use. Not surprisingly, the addition of alcohol to another psychoactive drug significantly increases the likelihood of a fatal accident. Women are more susceptible than are men to both alcohol and alcohol in combination with other drugs.[12] Little reversal of the alcohol effect is seen with caffeine.[11]

Acute doses of barbiturates dramatically impair human psychomotor performance.[13, 14] As an example, secobarbital (seconal) in 100mg doses produces dramatic impairment in driving simulation experiments.[14] Flight simulation studies with 200mg doses clearly indicate that tracking was degraded 10 hours after ingestion[15] and performance impairment persisted for 14 hours.[16] If impairment is exerted for a considerable period of time, then the likelihood of involvement in accidents increases though the blood levels of the drug may not be elevated.

Many medications have significant psychoactive properties and can impair coordinated task performance and visual perceptual activities necessary to drive safely.

Benzodiazepines are now the most frequently prescribed class of sedatives, tranquilizers, hypnotics, anxiolytics, and muscle relaxants. Diazepam (valium) is one of the most frequently prescribed drugs. Steering and visual search, lane tracking, and the ability to keep in a lane are affected by ingestion of 10mg of the drug. The potential effect of diazepam on driving performance is as strong on the eighth day of drug administration as it is on the first day.[17]

The residual sedative effect of flurazepam (dalmane) has been well studied. Morning driving performance, particularly lateral position control, is strongly influenced by ingestion of 30mg of flurazepam the previous night. The effects diminish by afternoon.[18] Lane tracking and the ability to keep in a lane are dependent upon lateral position control. Weaving is the failure to maintain lateral position.

Other classes of sedatives, tranquilizers, hypnotics, anxiolytics, and muscle relaxants have been shown to lead to similar impairment with hangover effect.[19]

Amphetamines may enhance performance in simulator studies. However, studies at the Addiction Research Foundation in Toronto demonstrated subjects who reported using drugs within 12 hours prior to driving accidents were in the group whose addictions involved amphetamine. The overall accident rate was higher than the overall expected rate for the group studied.[20]

At the Groningen Traffic Research Center in Holland, driving studies were employed to evaluate antidepressant drugs on drivers. Amitriptyline (elavil, endep, etrafon, limbitrol, triavil) and doxepin (adapin, sinequan) were noted to impair lateral position control. Amitriptyline also impaired speed control.[21] Alcohol has a significant effect on amitriptyline when ingested during the first two days of medication use. Desipramine (norpramin, pertofrane) and imipramine (pramine, janimine, tofranil) degrade driving performance as well in simulator studies.[22]

Antihistamines in conventional preparations are known to impair visual motor coordination through their sedative effect on the central nervous system. Tripolidine (actifed, triafed) by example significantly impairs coordination.[23] Diphenhydramine (allerdal, benadryl, benylin, bromanyl) and tripelenamine (PBZ) have not been demonstrated to affect pursuit tracking skills.[19] Newer selective antihistamines do not seem to cause much sedation because of their affinity for peripheral receptor sites.

Drowsiness (with EEG changes) persists for 12 hours following barbiturate or ether anesthesia, but not halothane.[24] Intravenous medications such as diazepam, lorazepam (ativan), and ultra-short acting barbiturates produce delayed recovery, and patients should be advised not to drive for 24 hours after receiving the drugs.[25] Nitrous oxide effects are transient.

Lidocaine (anestacon, dalcane, xylocaine) in high doses does not impair psychomotor performance for more than 2 hours. Combining the local anesthetic with epinephrine further reduces those effects. Etidocaine (duranest) has adverse effects on driving related skills for at least 2 hours. Atropine premedication has no adverse effects. Propoxyphene (darvon) and narcotics delay skill recovery.[19]

Drug levels determined in blood serve principally as indicators of drug use, and, to some degree, relative dose ingested and the time frame involved. Low drug levels do not necessarily mean that the person was not impaired.

Many medications have significant psychoactive properties and can impair coordinated task perform-

ance and visual perceptual activities necessary to drive safely. Careful drug choice may minimize these hazards. Appropriate public education may lessen driving risk. Reported are those trials where driving simulation or actual driving were monitored, reflecting "real-life" situations.

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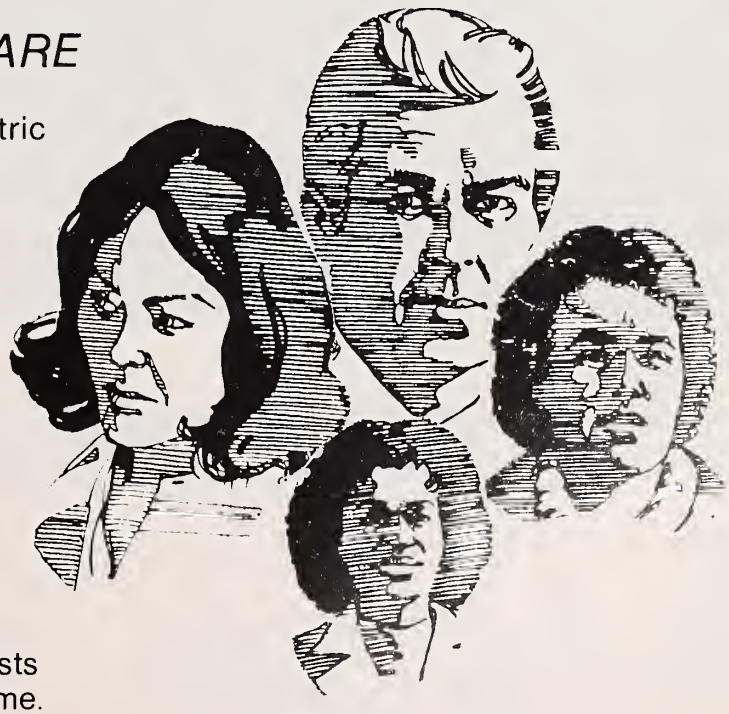
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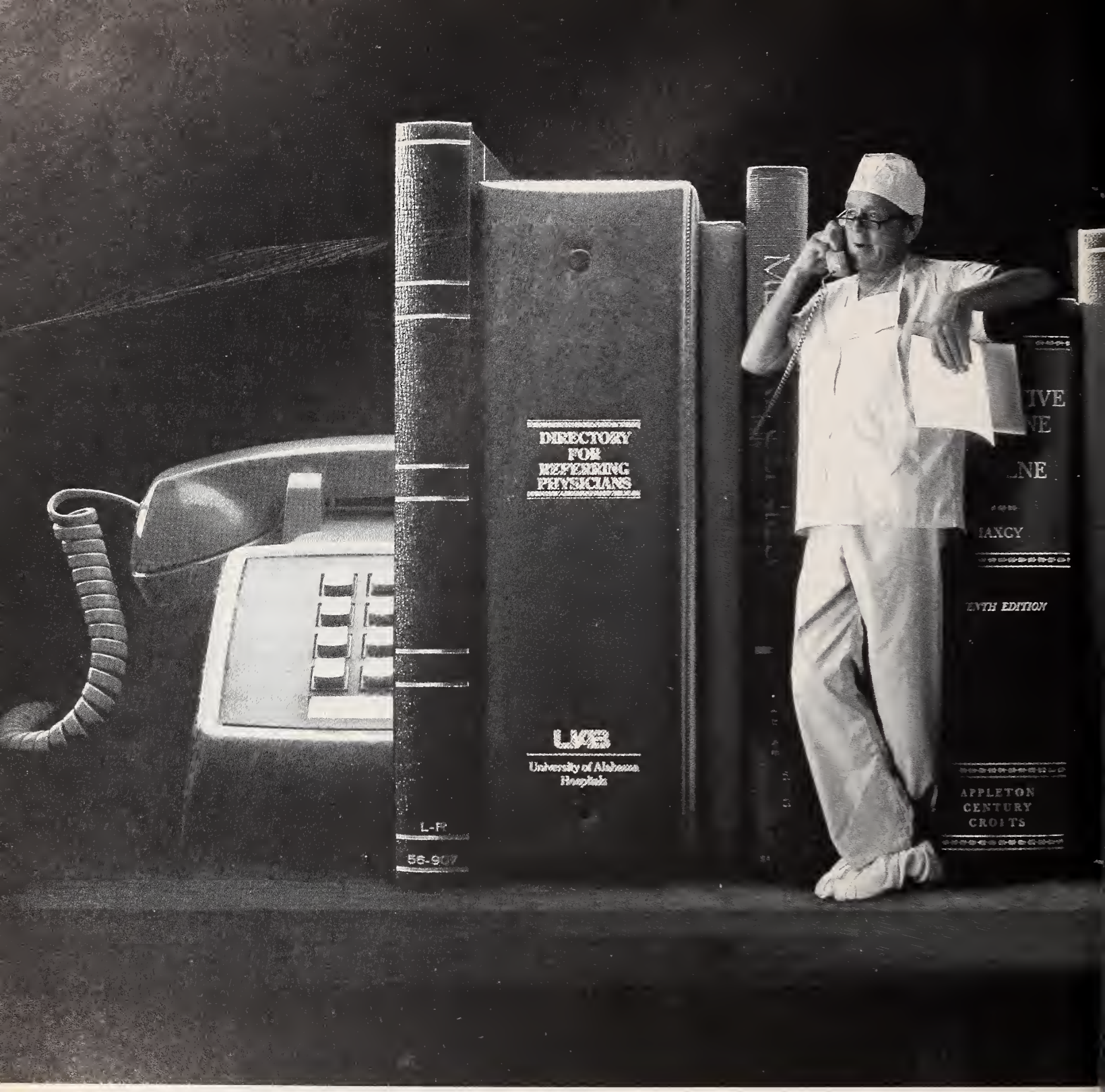
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The Grady Hospice And Its Volunteers

Melvin R. Moore, M.D.

At its inception, the goals of the Grady Hospice program were to decrease the number of hospital admissions for terminal care and to provide patients and staff with a positive program designed to meet the needs of cancer patients at a time when diagnostic and therapeutic interventions were no longer appropriate.

The Hospice movement is a relative newcomer to the American medical scene, beginning with the first American Hospice in Connecticut in 1974. This hospice, though uniquely American, was inspired by the English model that began with the founding of St. Christopher's Hospice in London in the late 1960s. Simply stated, the American hospice movement aimed to provide an alternative to standard inpatient hospital care for dying patients and their families. The putative benefits of the hospice model as compared with standard medical practices were to be: a concentration on symptom management rather than treatment of the underlying disease, resulting in less pain and an improved sense of well being; the inclusion of the social unit, patient and family, as the recipient of care and psychologic intervention, resulting in the identification of and possibility for dealing with issues raised by dying; and finally, a decrease in inappropriate and ineffective medical interventions being brought to bear on dying patients, resulting in the avoidance of unnecessary morbidity on the part of the patient and the conservation of medical resources (dollars, personnel, and beds) on the part of the health care system.

The National Hospice Study, mandated by Congress in 1979 and completed in 1984, has attempted to assess whether the benefits described above are being met by American hospices.[1] To this end, 2000 patients and families have been tracked through a terminal illness (93% had cancer) in 40 hospices and 14 facilities offering conventional care. Pain relief was found to be superior in hospital-based hospices but was roughly equivalent for home care hospices and conventional care. Overall quality of life, awareness, and level of satisfaction regarding care were not significantly different between hospice and conventional care settings. Home care proved to be a significant emotional burden for families, although family members did not seem to regret their decision. The utilization of hospital beds and medical resources (lab tests and x-rays) was decreased by hospice care and cumulative savings (in 1982 dollars) for care during the last week of life were approximately $900 per patient in home-care hospices and $650 per patient in hospital-based hospices. Conventional care fared quite well in the National Hospice study. What, then, is the place of and need for a hospice program?

The Grady Oncology program cares for approximately 400 new cancer patients each year. There are over 5000 outpatient visits per year. Seventy-five health professions students (64 medical students and house officers) rotate through this service each year. Since 1978, the Grady Hospice program has been an integral part of the oncology service. At its inception, the goals of the Grady Hospice program were to decrease the number of hospital admissions for terminal care and to provide patients and staff with a positive program designed to meet the needs of cancer patients at a time when diagnostic and therapeutic interventions were no longer appropriate.

Needs of the dying patients and their families that may be hidden from health care professionals are often identified by the hospice volunteer or by the hospice staff through their interactions with the hospice volunteer.

The Grady Hospice program is primarily home care based, with 2 inpatient rooms on the oncology ward available for respite care and crisis intervention admissions. The hospice has a full-time director, a director of social work services, two full-time RNs, one nurse's aid, a part-time

medical director (also director of oncology), and one part-time chaplain who coordinates bereavement services. This professional staff is supplemented by 25 active volunteers who visit patients and report formally to the staff on a weekly basis. Over 250 volunteers have participated in the Grady Hospice program, and over 750 patients and their families have received care through the Grady Hospice since 1978. During this period, over 75% of hospice patient deaths have occurred at home. The operating budget for hospice has been generated since November, 1983, when the Grady Hospice became the first Medicare certified hospice program in Georgia, through funds provided by the Tax Equity and Fiscal Responsibility Act passed by Congress in 1982 (providing Medicare coverage for hospice services).

The unique ingredient of hospice care that has allowed the Grady Hospice to flourish has been the extensive use of and reliance on lay volunteers. These volunteers, coming from all walks of life, have been able to provide an intense level of emotional support and caring for individual hospice patients and families that cannot be matched on a regular basis by professional health care workers. Their fresh viewpoints and burning questions keep the hospice staff in touch with their own vulnerability and humanity, thus protecting them from being mere "death professionals." They raise ethical issues, challenge traditional medical viewpoints, and often bring the affect of the patient and/or family back with them to the hospice staff. Needs of dying patients and their families that may be hidden from health care professionals are often identified by the hospice volunteer or by the hospice staff through their interactions with the hospice volunteer. These needs, once identified, can then be addressed by professionals in social work, nursing, medicine, and pastoral counseling through the volunteer or by the appropriate hospice staff member. The effectiveness of these well trained and supported volunteers was attested to by their selection as recipients for the 1985 J. C. Penny Golden Rule Award for outstanding volunteer service.

A medical staff open and responsive to non-medical outsiders, able to work with an interdisciplinary team, and able to function effectively beyond the confines of curative interventions are all, in part, legacies of the Grady Hospice and its volunteers.

The salutary effects of the Hospice program have been felt by the medical students and house officers at Grady as well as by the non-hospice professional staff. Interactions with hospice volunteers, hospice patients, and hospice staff have become routine for the Grady ambulance service, emergency room staff, and inpatient staff. The inclusion of Hospice in decision making at all levels has greatly facilitated the delivery of care to hospice patients and has had a softening or humanizing effect on the hospital staff and trainees. Ethical issues such as do-not-resuscitate orders, withholding medical treatments, and truth telling are approached in a positive and caring atmosphere. Teaching about the appropriate use of analgesics, the importance of symptom control, and use of a team model for dealing with emotional and physical issues has been fostered by the presence of the hospice program and its volunteers. The overall effects of the Grady Hospice program on Grady staff and students cannot be measured in dollars saved and deaths removed from the hospital. A medical staff open and responsive to non-medical outsiders, able to work with an interdisciplinary team, and able to function effectively beyond the confines of curative interventions are all, in part, legacies of the Grady Hospice and its volunteers.

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Prepared at the Request of the Georgia Division, American Cancer Society. Others wishing to contribute papers are invited to send them to T. Gray Fountain, M.D., Cancer Section Editor, 910 N. Jefferson, Albany, GA 31708.

No Safe Harbors

David B. Poythress

"With respect to potential civil liability, there are virtually no safe harbors. . . ."

The length of time that a physician should retain patient records is an issue of continuing concern in the profession. Unfortunately, there are virtually no safe harbors and very little official guidance on the question.

Neither the Georgia Medical Practice Act, O.C.G.A. 43-34-20 *et seq.* nor the Regulations of the Composite State Board of Medical Examiners (the "Board") prescribes a precise retention period for patient records.

Section 360-2-.09(f) of the Board's Regulations does describe "Unprofessional conduct" as including:

> *Any departure from, or the failure to conform to, the minimal standards of acceptable and prevailing medical practice.*
>
> *Guidelines to be used by the Board in defining such standards may include, but are not restricted to:*
>
> * * *
>
> *3. Records. Maintenance of records to furnish documentary evidence of the course of the patient's medical evaluation, treatment and response.*

And Section 360-2.19(d) of the Regulations further provides that "unprofessional conduct" shall include:

> *Not maintaining appropriate records whenever Schedule II drugs are prescribed. Appropriate records, at a minimum, shall contain the following:*
>
> *1. The patient's name and address;*
> *2. The date, drug name, drug quantity, and diagnosis for all Schedule II prescriptions;*
> *3. Records concerning the patient history.*

Beyond this rather spare official direction, a physician should be guided by a defensive strategy with respect to potential private malpractice suits.

The basic statute of limitations (the "Statute") for medical malpractice in Georgia is "2 years after the date on which an injury or death arising from a negligent or wrongful act or omission occurred." O.C.G.A. 9-3-71. However, this period can be tolled for long periods of time and under such circumstances that the physician cannot possibly know whether or for how long it has been tolled.

For example, the "statute of limitations" with respect to foreign objects left in a patient's body runs until 1 year after the object is discovered, O.C.G.A. 9-3-72.

Similarly, the "Statute" is tolled during any period of time when the potential plaintiff is under any legal disability, such as when he is a minor or is legally incompetent because of mental retardation or mental illness. An initial adjudication of incompetency is not required in order for the statute to be tolled, and it is immaterial whether the disability existed at the time the cause of action

accrued or occurred thereafter. Nor, with respect to minority, is the disability removed by the appointment of a guardian, *Barnum v. Martin,* 135 Ga. App. 712, 219 SE2d 341 (1975), even one who ineffectually attempts to protect the minor's legal interests, *Monroe v. Simmons,* 86 Ga. 344, 12 SE 643 (1890), or by the minor's engaging in litigation in his own right, *Barnum, supra.*

Note, in this regard, that the potential plaintiff may be someone other than the patient; a surviving child may bring an action for the wrongful death of his parent at any time until 2 years after the child attains his majority.

The "Statute" is also tolled for any period that the physician has left Georgia (other than for temporary periods) and is therefore not subject to the process of Georgia courts, O.C.G.A. 9-3-94. And, finally, O.C.G.A. 9-3-96 provides that whenever the defendant has committed a fraud "by which the plaintiff has been debarred or deterred from bringing an action, the period of limitation shall run only from the time of the plaintiff's discovery of the fraud." In *Johnson v. Gammell,* 165 Ga. App. 425, 301 SE2d 492 (1983), it was said by way of *dicta* that a physician's failure to disclose his own mistake to a patient could constitute such a fraud.

As a matter of information only, Section 290-5-6-.11 of the Regulations of the Department of Human Resources pertaining to hospitals provides:

Hospitals shall retain all medical records, at least until the sixth anniversary of the patient's discharge. In the case of patients who have not attained majority at the time of the discharge, hospitals shall retain such records at least until the twenty-seventh birthday of the patient. (emphasis added)

Short of retaining all records permanently, a physician's minimum regard for his own safety suggests that he retain certain categories of records for certain* minimum *periods. . . .

Of course, this provision does not mean that the record may not be needed in defense of litigation after the prescribed retention period. And we are advised by the Georgia Hospital Association that virtually all hospitals retain all records permanently, converting to microfilm format after the sixth year.

Conclusion

The only official requirements with respect to retention of patient records are those very minimal standards cited above in Section 360-2-.09(d) and (f) of the Regulations of the Board.

With respect to potential civil liability, there are virtually no safe harbors, *i.e.,* time periods beyond which it can be said, with absolute certainty, that a patient record will never be needed in defense of a claim. Thus, the safest (but also the most burdensome) course is to retain all patient records permanently.

Short of retaining all records permanently, a physician's minimum regard for his own safety suggests that he retain certain categories of records for certain *minimum* periods:

a) *All* records should be retained for *at least* two years from the last date of treatment;
b) Records of minor patients should be retained *at least* until the patient's 20th birthday;
c) Records of patients who show signs of mental illness or mental retardation (whether or not diagnosed) should be kept permanently;
d) Records involving surgery wherein any foreign object could have been left in the patient's body should be kept permanently.

Mr. Poythress is MAG's General Counsel.

Mechanics of Cardiopulmonary Resuscitation: Past, Present, Future

Edward L. Hall, M.D., and Rebecca Andrews, R.N.

"The desire to improve the rate of successful resuscitation and functional long-term survival for victims of cardiac arrest has provided the impetus for continued research in the field of CPR."

VARIOUS FORMS of cardiopulmonary resuscitation (CPR) have been practiced since the beginning of recorded history. In 175 A.D., Galen described the use of bellows to inflate the lungs of a dead animal.[1, 2] Standards for resuscitation were set by the Royal Humane Society in 1775 which described the following method as being the most effective: "to blow by force into the lung, by applying the mouth to that part of the patient, closing his nostrils with one hand, and gently expelling the air again by pressing the chest with the other."[3]

Experimentation in CPR flourished in the late 1800s, with Schiff performing the first open-chest cardiac massage in a dog in 1874.[4] In 1885, Dr. Franz Koenig, Professor of Surgery at Gottingen, Germany, reported six successful resuscitative efforts in man utilizing external cardiac compression.[5]

Modern CPR was born in the 1960s when Kouwenhoven, et al. combined the techniques of artificial ventilation, sternal compression, and electrical defibrillation to resuscitate dogs and eventually human beings.[6] The present standards for CPR were first set in 1973[7] and updated in 1979[8] by a committee of experts meeting at the National Conference on Cardiopulmonary Resuscitation and Emergency Cardiac Care.

Even as standards for CPR were being set, investigators were questioning the mechanism of blood flow produced by closed-chest compression. While no one disputed the fact that many lives were being saved by the widespread application of CPR to moribund victims of cardiac arrest, there was growing concern over the quality of life being experienced by survivors. Grenvik and Safar[9] reported in 1981 that half of CPR early survivors developed brain death, and 10% to 40% of long-term survivors suffered permanent brain damage. The desire to improve the rate of successful resuscitation and functional long-term survival for victims of cardiac arrest has provided the impetus for continued research in the field of CPR.

Simultaneous chest compression and ventilation (SCV-CPR), "MAST" assisted-CPR, interposed abdominal compression-CPR (IAC-CPR), open chest CPR (OC-CPR), direct mechanical ventricular assistance (DMVA), cardiopulmonary-cerebral resuscitation (CPCR), high impulse CPR, and reanimatology are representative of catch phrases for the "new CPR."

Contemporary CPR experiments have focused on the physiology of external cardiac massage. Initially, it was assumed that forward blood flow during CPR was produced by the compression of the heart between the sternum and the thoracic vertebrae.[10] To date, however, little data have been presented to confirm this theory. The validity of this assumption was questioned as early as 1962 by Weale and Rothwell-Jackson who speculated that it might be the thorax rather than the heart which acted as the pump.[11] Data accumulated from animal studies by Rudikoff, Neimann, Criley, Werner and their associates, supported the thoracic pump theory.[12-17] According to this theory, the change in intrathoracic pressure during external compression forces blood from the thoracic vessels into the systemic circulation, with the heart acting as a conduit, not as a pump.

If the thoracic pump mechanism is responsible for blood flow during closed chest CPR, then maneuvers which increase intra-thoracic pressure may improve blood flow during CPR, with subsequent improvement of functional long-term survival. Many such maneuvers have been reported in the literature.

The most widely reported "new CPR" technique, which is based on the thoracic pump theory, is interposed abdominal compression-CPR. In IAC-CPR an abdominal compression is delivered to the subject during each relaxation phase of chest compression. IAC-CPR has been shown to increase arterial diastolic pressure, cardiac output, oxygen consumption, and brain perfusion when compared to standard closed-chest CPR in animals.[18-23] Mateer and associates reported no significant difference between groups of human subjects receiving IAC-CPR and standard closed-chest CPR in a pilot study recently conducted in Milwaukee County, Wisconsin.[24] Blaine C. White and his associates recently reported a study in which IAC-CPR was actually associated with a severe inhibition of oxygen utilization by canine brain mitochondria.[25] Obviously, further study is needed before this technique

can be recommended for routine resuscitation.

Simultaneous chest compression and ventilation CPR has been reported in the literature by Niemann, Luce, Babbs, and others.[26-29] Chandra and her associates showed that when a technique of simultaneous ventilation and compression was alternated with conventional chest compression in 11 patients in cardiac arrest, the mean systolic radial artery pressure increased significantly, and carotid blood flow doubled.[30] However, in a study reported by Sanders and associates, techniques such as SCV-CPR that increased carotid blood flow or systolic pressure did not consistently improve survival from cardiac arrest.[31]

The most widely reported "new CPR" technique, which is based on the thoracic pump theory, is interposed abdominal compression-CPR.

The medical anti-shock trouser (MAST) has also been advocated for use in CPR. It is recognized that properly applied and inflated pneumatic compression garments will raise blood pressure in hypovolemic subjects,[32, 33] though the mechanism underlying this elevation of blood pressure remains the subject of vigorous debate. The strongest argument for using MAST in CPR is related to the increase in blood pressure resulting from application of the suit. Mahoney and Mirick reported a prospective evaluation of MAST on patients in cardiac arrest unresponsive to initial conventional therapy.[34] This study showed a statistically significant increase in resuscitation of patients only when the presenting rhythm was a pulseless idioventricular rhythm (PIVR). Patients with other rhythms failed to respond either positively or negatively to MAST application. Clearly there is a need for further evaluation before MAST-assisted CPR can be recommended for routine use for all patients in cardiac arrest.

Maier and associates[35] believe that both the cardiac pump and thoracic pump contribute to blood flow production in CPR depending on the physiologic situation. They state that during high impulse manual CPR, direct cardiac compression effects appear to predominate, whereas with low momentum, prolonged compression techniques, the thoracic pump effects are more significant. In their study, increasing the rate of compression was found to significantly improve cardiac output while maintaining good coronary blood flow. Further detailed hemodynamic studies utilizing human subjects in cardiac arrest are needed before this technique can be recommended.

With the advent in the 1960s of an effective method of closed chest CPR, a method which could readily be taught to all levels of health care providers and laypersons and be employed in out-of-the-hospital as well as in-hospital settings, open chest cardiac massage (OCCPR) rapidly fell into disuse. However, because closed chest CPR has not been as successful in producing long-term functional post-resuscitation survivors as the medical community had hoped, there has been a resurgence of interest in OCCPR. There is considerable evidence to suggest that OCCPR may be more effective than closed chest CPR and that the risk of thoracotomy may be outweighed by the benefits to patients who do not respond to conventional CPR within 10 minutes.[36-40] In their study on brain mitochondrial function with different artificial perfusion methods, Blain C. White and associates reported that brain mitochondria taken from dogs treated with OCCPR showed little difference from those subjected to zero ischemia.[25] These are exciting data; however, further scientific investigation is needed before widespread use of this technique can be recommended.

There is a need for further evaluation before MAST-assisted CPR can be recommended for routine use for all patients in cardiac arrest.

Direct mechanical ventricular assistance (DMVA) is yet another development aimed at improving the efficacy of OCCPR. As reported in the literature, DMVA is a method of circulatory support utilizing a bell-shaped device that is affixed to the heart by apical suction and that alternatively compresses and expands the ventricles.[41] In a recent animal study by Bartlett and associates, the DMVA device was reported to be more effective than closed-chest CPR or OCCPR in providing satisfactory circulatory support.[41] This device is

still in an experimental stage of development; however, its potential for the future is great.

Tremendous strides have been made in the field of cardio-pulmonary-cerebral resuscitation. There remains, however, much more to be done. The controversy regarding flow mechanics continues. "New" methods of CPR hold as many unanswered questions concerning efficacy as they do promise for improved survival. While research continues into these matters, it will behoove practitioners to remember that the "old standard" is still "the standard" and that to date, no recommendations for changes in mechanical resuscitation techniques have been made by either the American Heart Association or the Committee on Cardio-Pulmonary Resuscitation and Emergency Cardiac Care.

Acknowledgements

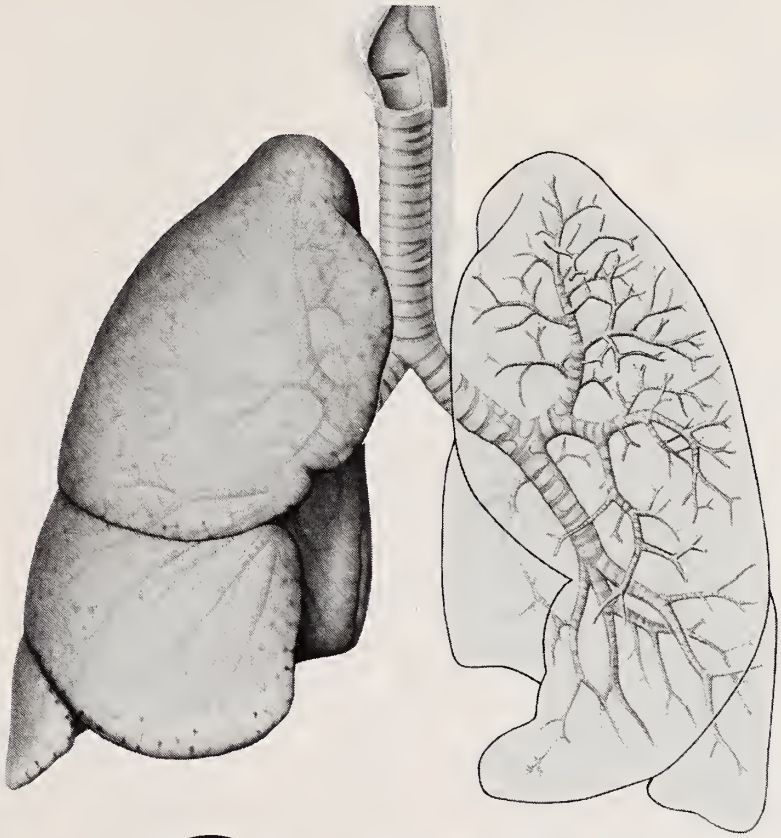
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Indications and Usage: Ceclor® (cefaclor, Lilly) is indicated in the treatment of the following infections when caused by susceptible strains of the designated microorganisms:

Lower respiratory infections, including pneumonia caused by *Streptococcus pneumoniae (Diplococcus pneumoniae), Haemophilus influenzae*, and *S. pyogenes* (group A beta-hemolytic streptococci)

Appropriate culture and susceptibility studies should be performed to determine susceptibility of the causative organism to Ceclor.

Contraindication: Ceclor is contraindicated in patients with known allergy to the cephalosporin group of antibiotics.

Warnings: IN PENICILLIN-SENSITIVE PATIENTS, CEPHALOSPORIN ANTIBIOTICS SHOULD BE ADMINISTERED CAUTIOUSLY. THERE IS CLINICAL AND LABORATORY EVIDENCE OF PARTIAL CROSS-ALLERGENICITY OF THE PENICILLINS AND THE CEPHALOSPORINS, AND THERE ARE INSTANCES IN WHICH PATIENTS HAVE HAD REACTIONS, INCLUDING ANAPHYLAXIS, TO BOTH DRUG CLASSES.

Antibiotics, including Ceclor, should be administered cautiously to any patient who has demonstrated some form of allergy, particularly to drugs.

Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics (including macrolides, semisynthetic penicillins, and cephalosporins); therefore, it is important to consider its diagnosis in patients who develop diarrhea in association with the use of antibiotics. Such colitis may range in severity from mild to life-threatening.

Treatment with broad-spectrum antibiotics alters the normal flora of the colon and may permit overgrowth of clostridia. Studies indicate that a toxin produced by *Clostridium difficile* is one primary cause of antibiotic-associated colitis.

Mild cases of pseudomembranous colitis usually respond to drug discontinuance alone. In moderate to severe cases, management should include sigmoidoscopy, appropriate bacteriologic studies, and fluid, electrolyte, and protein supplementation. When the colitis does not improve after the drug has been discontinued, or when it is severe, oral vancomycin is the drug of choice for antibiotic-associated pseudomembranous colitis produced by *C. difficile*. Other causes of colitis should be ruled out.

Precautions: *General Precautions* — If an allergic reaction to Ceclor® (cefaclor, Lilly) occurs, the drug should be discontinued, and, if necessary, the patient should be treated with appropriate agents, e.g., pressor amines, antihistamines, or corticosteroids.

Prolonged use of Ceclor may result in the overgrowth of nonsusceptible organisms. Careful observation of the patient is essential. If superinfection occurs during therapy, appropriate measures should be taken.

Positive direct Coombs' tests have been reported during treatment with the cephalosporin antibiotics. In hematologic studies or in transfusion cross-matching procedures when antiglobulin tests are performed on the minor side or in Coombs' testing of newborns whose mothers have received cephalosporin antibiotics before parturition, it should be recognized that a positive Coombs' test may be due to the drug.

Ceclor should be administered with caution in the presence of markedly impaired renal function. Under such conditions, careful clinical observation and laboratory studies should be made because safe dosage may be lower than that usually recommended.

As a result of administration of Ceclor, a false-positive reaction for glucose in the urine may occur. This has been observed with Benedict's and Fehling's solutions and also with Clinitest® tablets but not with Tes-Tape® (Glucose Enzymatic Test Strip, USP, Lilly).

Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.

Usage in Pregnancy — *Pregnancy Category B* — Reproduction studies have been performed in mice and rats at doses up to 12 times the human dose and in ferrets given three times the maximum human dose and have revealed no evidence of impaired fertility or harm to the fetus due to Ceclor® (cefaclor, Lilly). There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed.

Nursing Mothers — Small amounts of Ceclor have been detected in mother's milk following administration of single 500-mg doses. Average levels were 0.18, 0.20, 0.21, and 0.16 mcg/ml at two, three, four, and five hours respectively. Trace amounts were detected at one hour. The effect on nursing infants is not known. Caution should be exercised when Ceclor is administered to a nursing woman.

Usage in Children — Safety and effectiveness of this product for use in infants less than one month of age have not been established.

Adverse Reactions: Adverse effects considered related to therapy with Ceclor are uncommon and are listed below:

Gastrointestinal symptoms occur in about 2.5 percent of patients and include diarrhea (1 in 70).

Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment. Nausea and vomiting have been reported rarely.

Hypersensitivity reactions have been reported in about 1.5 percent of patients and include morbilliform eruptions (1 in 100). Pruritus, urticaria, and positive Coombs' tests each occur in less than 1 in 200 patients. Cases of serum-sickness-like reactions (erythema multiforme or the above skin manifestations accompanied by arthritis/arthralgia and, frequently, fever) have been reported. These reactions are apparently due to hypersensitivity and have usually occurred during or following a second course of therapy with Ceclor. Such reactions have been reported more frequently in children than in adults. Signs and symptoms usually occur a few days after initiation of therapy and subside within a few days after cessation of therapy. No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome.

Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy.

Other effects considered related to therapy included eosinophilia (1 in 50 patients) and genital pruritus or vaginitis (less than 1 in 100 patients).

Causal Relationship Uncertain — Transitory abnormalities in clinical laboratory test results have been reported. Although they were of uncertain etiology, they are listed below to serve as alerting information for the physician.

Hepatic — Slight elevations in SGOT, SGPT, or alkaline phosphatase values (1 in 40).

Hematopoietic — Transient fluctuations in leukocyte count, predominantly lymphocytosis occurring in infants and young children (1 in 40).

Renal — Slight elevations in BUN or serum creatinine (less than 1 in 500) or abnormal urinalysis (less than 1 in 200).

[D617B2R]

Note. Ceclor® (cefaclor, Lilly) is contraindicated in patients with known allergy to the cephalosporins and should be given cautiously to penicillin-allergic patients.

Penicillin is the usual drug of choice in the treatment and prevention of streptococcal infections, including the prophylaxis of rheumatic fever. See prescribing information.

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Elevations of transaminases with and without concomitant elevations in alkaline phosphatase and bilirubin have been reported. Such elevations may disappear even with continued treatment; however, four cases of hepatocellular injury by verapamil have been proven by rechallenge. Periodic monitoring of liver function is prudent during verapamil therapy. Patients with atrial flutter or fibrillation and an accessory AV pathway (e.g. W-P-W or L-G-L syndromes) may develop increased antegrade conduction across the aberrant pathway bypassing the AV node, producing a very rapid ventricular response after receiving ISOPTIN (or digitalis). Treatment is usually D.C.-cardioversion, which has been used safely and effectively after ISOPTIN. Because of verapamil's effect on AV conduction and the SA node, 1° AV block and transient bradycardia may occur. High grade block, however, has been infrequently observed. Marked 1° or progressive 2° or 3° AV block requires a dosage reduction or, rarely, discontinuation and institution of appropriate therapy depending upon the clinical situation. Patients with hypertrophic cardiomyopathy (IHSS) received verapamil in doses up to 720 mg/day. It must be appreciated that this group of patients had a serious disease with a high mortality rate and that most were refractory or intolerant to propranolol. A variety of serious adverse effects were seen in this group of patients including sinus bradycardia, 2° AV block, sinus arrest, pulmonary edema and/or severe hypotension. Most adverse effects responded well to dose reduction and only rarely was verapamil discontinued. **Precautions:** ISOPTIN should be given cautiously to patients with impaired hepatic function (in severe dysfunction use about 30% of the normal dose) or impaired renal function, and patients should be monitored for abnormal prolongation of the PR interval or other signs of excessive pharmacologic effects. Studies in a small number of patients suggest that concomitant use of ISOPTIN and beta blockers may be beneficial in patients with chronic stable angina. Combined therapy can also have adverse effects on cardiac function. Therefore, until further studies are completed, ISOPTIN should be used alone, if possible. If combined therapy is used, close surveillance of vital signs and clinical status should be carried out. Combined therapy with ISOPTIN and propranolol should usually be avoided in patients with AV conduction abnormalities and/or depressed left ventricular function. Chronic ISOPTIN treatment increases serum digoxin levels by 50% to 70% during the first week of therapy, which can result in digitalis toxicity. The digoxin dose should be reduced when ISOPTIN is given, and the patients should be carefully monitored to avoid over- or under-digitalization. ISOPTIN may have an additive effect on lowering blood pressure in patients receiving oral antihypertensive agents. Disopyramide should not be given within 48 hours before or 24 hours after ISOPTIN administration. Until further data are obtained, combined ISOPTIN and quinidine therapy in patients with hypertrophic cardiomyopathy should probably be avoided, since significant hypotension may result. Clinical experience with the concomitant use of ISOPTIN and short- and long-acting nitrates suggest beneficial interaction without undesirable drug interactions. Adequate animal carcinogenicity studies have not been performed. One study in rats did not suggest a tumorigenic potential, and verapamil was not mutagenic in the Ames test. *Pregnancy Category C*: There are no adequate and well-controlled studies in pregnant women. This drug should be used during pregnancy, labor and delivery only if clearly needed. It is not known whether verapamil is excreted in breast milk; therefore, nursing should be discontinued during ISOPTIN use. **Adverse Reactions:** Hypotension (2.9%), peripheral edema (1.7%), AV block: 3rd degree (0.8%), bradycardia: HR < 50/min (1.1%), CHF or pulmonary edema (0.9%), dizziness (3.6%), headache (1.8%), fatigue (1.1%), constipation (6.3%), nausea (1.6%), elevations of liver enzymes have been reported. (See *Warnings.*) The following reactions, reported in less than 0.5%, occurred under circumstances where a causal relationship is not certain: ecchymosis, bruising, gynecomastia, psychotic symptoms, confusion, paresthesia, insomnia, somnolence, equilibrium disorder, blurred vision, syncope, muscle cramp, shakiness, claudication, hair loss, macules, spotty menstruation. **How Supplied:** ISOPTIN (verapamil HCl) is supplied in round, scored, film-coated tablets containing either 80 mg or 120 mg of verapamil hydrochloride and embossed with "ISOPTIN 80" or "ISOPTIN 120" on one side and with "KNOLL" on the reverse side. Revised August, 1984. 2385

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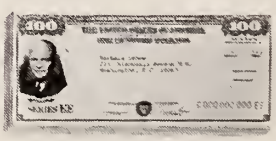


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Collins, Russell C., Richmond — ACT (N-2) — FP
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Cruz, Benjamin G., Walton — ACT — U
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Daniels, Gary M., Floyd-Polk-Chattooga — ACT (N-2) — EM
Redmond Park Hospital, EM Dept., Rome 30161

DeWitt, Henry L., Hart — ACT — FP
113 Athens St., Hartwell 30643

Dorsner, David E., Georgia Medical — ACT — EM
P.O. Box 9787, Savannah 31412

Downing, David L., Floyd-Polk-Chattooga — ACT (N-2) — IM
7 John Maddox Dr., Rome 30161

Duggan, Asa D., Jr., Richmond — ACT — GS
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Durham, John C., Flint — ACT (N-2) — IM
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2030 Pernoshal Court-D, Dunwoody 30338

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800 St. Sebastian Way, Augusta 30901-2686

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50 Plaza Way, Ste. G, Marietta 30060

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Eisenhower Army Medical Center, Ft. Gordon 30905-5650

Giles, Eugene H., Southwest Georgia — ACT — GP
322 S. Main St., Blakely 31723

Hadley, Phillip E., Muscogee — Service — OBG
MACH Box 543, Ft. Benning 31905

Haltiwanger, Steven G., South Georgia — ACT (N-1) — P
215 Breckenridge Dr., Valdosta 31602

Hancock, Thomas G., Dougherty — ACT (N-2) — AN
408 Fourth Ave., Albany 31701-1916

Hardy, Bernard L., Ben Hill-Irwin — ACT — FP
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3623 J Dewey Gray Cir., Ste. 302, Augusta 30909

Harris, James R., Ben Hill-Irwin — ACT — ORS
P.O. Box 1476, Fitzgerald 31750

Hulsey, Wayne G., Walton — ACT — R
330 Alcova St., Monroe 30655

Inthachak, Nirandr, Coffee — ACT — R
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MCG, Augusta 30912

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1350 Walton Way, Augusta 30904

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Mathews, Wayne S., Jr., Richmond — ACT — AN
Dept. of Anesthesiology, MCG, Augusta 30912

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7 John Maddox Dr., Rome 30161

Mangan, Aloysius T., Walker-Catoosa-Dade — ACT — FP
Tri-County Hospital, Ft. Oglethorpe 30742

Martin, Wallace F., Gwinnett-Forsyth — ACT (N-1) — GS/TS
601 Professional Dr., Lawrenceville 30245

Millians, W. Swanson, DeKalb — ACT — CHP/P
1970 Cliff Valley Way, Ste. 107, Atlanta 30329

Patel, Nayana, Walton — ACT — AN
929 Holly Hill Rd., Monroe 30655

Patterson, Anthony C., Richmond — I&R — IM
Medical College of Georgia, Augusta 30912

Peasant, John M., Muscogee — ACT (N-1) — FP
710 Center Street, Ste. 506, Columbus 31994

Peller, Jeffrey S., Floyd-Polk-Chattooga — ACT (N-1) — RHU

1825 Martha Berry Blvd., Rome 30161

Pierce, Volney E., Jr., Richmond — I&R — IM-PTH
4078 Flintrock Way, Martinez 30907

Portwine, E. Fred, Ware — ACT (N-2) — OTO
1921 Alice Street, Ste. 1-A, Waycross 31501

Prasad, Rayasam V., Clayton — ACT — A
6567 Professional Place, Riverdale 30274

Robbins, Angela A., Richmond — ACT — GS
2302 Wrightsboro Rd., Augusta 30904

Rosenblatt, Jeffrey S., Dougherty — ACT (N-2) — PD
1700 E. Broad Ave., Albany 31705

Schiff, Arthur D., Gwinnett-Forsyth — ACT (N-2) — N
100 Medical Center Blvd., Ste. 190, Lawrenceville 30246

Schroeder, Christopher W., Georgia Medical Society — I&R
Memorial Medical Center, P.O. Box 23089, Savannah 31403

Stock, Marie C., MAA — I&R — AN
Dept. of Anesthesiology, 1365 Clifton Rd., Atlanta 30322

Sueling, Keith, Richmond — ACT (N-2) — CD/IM
1349 Druid Park Ave., Augusta 30904

Tadsen, Trent S., Troup — ACT (N-2) — AN
1514 Vernon Rd., LaGrange 30240

Varner, William D., Jr., Muscogee — (N-1) — GS
1310-13th St., Ste. 203, Columbus 31901

Tamblyn, Thomas M., III, Emanuel — ACT — IM
105 Racetrack St., Swainsboro 30401

Vollrath, Richard C., Blue Ridge — ACT — GS
Rt. 1, Box 1238, Blue Ridge 30513

Wallace, James J., III, Richmond — ACT (N-2) — P
1205 Troupe St., Augusta 30904

Weil, Craig E., Cobb — ACT (N-2) — ORS/HS
1620 Mulkey Rd., Austell 30001

Wise, Robert H., South Georgia — ACT (N-2) — R
2704-D N. Oak St., P.O. Box 3499, Valdosta 31604-3499

PERSONALS

First District

Edgar J. Filson, M.D., of Savannah, has been named a Fellow of the American College of Radiology. Dr. Filson was selected for this special honor for his outstanding work in the field of medical radiology.

Third District

J. Bruce Carr, M.D., a nephrologist from Columbus, has been reelected to the Board of Directors of the National Kidney Foundation of Georgia. Dr. Carr, who is medical director of Dialysis Clinic, Inc., also will be on the foundation's new medical advisory board.

Fourth District

Andrew P. Morley, Jr., M.D., of Decatur, has been elected to a 3-year term on the Board of Directors of the American Academy of Family Physicians. Dr. Morley has been a delegate or alternate delegate from Georgia to the AAFP Congress of Delegates for 4 years.

Fifth District

James Carlton Tanner, M.D., a surgeon from Atlanta, received the Southern Medical Association's Distinguished Service Award for 1985. The award is the highest honor bestowed by the Association and is given annually for outstanding contributions to the advancement of medical science. Dr. Tanner's 20 years of research has culminated in the production of the skin mesh graft technique and equipment.

The American Academy of Otolaryngology-Head and Neck Surgery selected **William E. Silver, M.D.,** of Atlanta, as Chairman-Elect of the Board of Governors at its annual meeting held in Atlanta in October. Dr. Silver is also serving as President of the National Alumni Association of New York University representing the Department of Otolaryngology-Head and Neck Surgery.

Gerald W. Staton, Jr., M.D., an Atlanta internist, has been elected to Fellowship in the American College of Physicians.

Eyvin P. Rasmussen, M.D., of Roswell, has been named a Fellow of the American College of Radiology.

Atlanta urologist, **William J. Morton, M.D.,** has received the Doctor of Juris degree from Woodrow Wilson College of Law in Atlanta. Dr. Morton, in addition to being Board Certified in Urology, is also certified by the American Board of Quality Assurance and Utilization Review Physicians. He also served for 3 years as Medical Director of the Georgia Medical Care Foundation.

Sixth District

George T. Henry, of Barnesville, was recognized for 30 years of continued membership in the American Academy of Family Physicians. Dr. Henry was among a select group of members who have devoted 25, 30, and 35 years of involvement in the Academy's growth.

Seventh District

Marietta surgeon, **Charles R. Underwood, M.D.,** has been elected President of the Georgia Surgical Society for 1985-86.

Eighth District

Floyd E. Davis, M.D., a family practitioner of Waycross, has been honored by the Brunswick/Waycross

region medical alumni of the Medical College of Georgia with the 1985 Physician's Physician Award. This award is presented in acknowledgement of a physician's accomplishments as a physician, community leader, and alumnus of MCG.

Family practitioner, **Mack V. Greer, M.D.,** of Valdosta has been honored by the Valdosta region medical alumni of the Medical College of Georgia with the 1985 Physician's Physician Award. Dr. Greer serves as medical director of the Georgia Home Rehabilitation, medical director of the Valdosta/Lowndes County Ambulance Service, and as chief of emergency services at South Georgia Medical Center. He serves as a college physician at Valdosta State College's student health center and is the medical director of the advanced emergency medical technician school.

Ninth District

Martin H. Smith, M.D., of Gainesville, was installed as president of the American Academy of Pediatrics at its annual meeting in San Antonio, Texas.



Evelyn (Mrs. Brit B., Jr.) Gay (seated) is pictured here with Auxiliary past-president Judy (Mrs. George R.) Jones at one of the recent autographing parties honoring the author, held at the Atlanta dress shop of Mary (Mrs. David) Morgan, a member of the DeKalb County Medical Auxiliary.

AUXILIARY NEWS

There are still some doctors in the state who have not ordered their copy of the Auxiliary's book, *The Medical Profession in Georgia, 1733-1983.* This book is being sold to raise funds for the MAG Auxiliary's William R. Dancy, M.D. Medical Student Loan Fund.

If you have not yet placed your order for a book (or if you would like to order one as a gift for someone else), please do so *now* by sending your check for $25.00 (made payable to the MAG Auxiliary) to Ms. Talitha Russell at MAG headquarters in Atlanta. Or if you desire a specially-autographed copy for yourself or another person, you may address your order directly to the author, Mrs. Brit Gay, Jr. (Evelyn) at 911 Vistavia Circle, Decatur, GA 30033. Books will be mailed out immediately and postage will be paid by the Auxiliary.

Don't hesitate! Join the hundreds of other people who have enjoyed reading and now cherish their copy of this most interesting story about Georgia's medical profession, past and present — and help your Auxiliary at the same time. The ladies will thank you.

DEATHS

Laurence B. Dunn

Laurence B. Dunn, M.D., died September 13.

Dr. Dunn had been a member of the Georgia Medical Society since 1929 and its president from 1951-1952. Dr. Dunn graduated with honors from Princeton University in 1920 and graduated from Harvard Medical School with honors in 1928. He began practicing general medicine in Savannah in 1928 and continued this practice until retiring in 1971. He was a member of the medical staffs of St. Joseph's Hospital and Memorial Medical Center and for many years was Medical Director of the Georgia Infirmary.

Following his retirement he moved to Bluffton, SC, where he was an active and respected member of the community until his death.

QUOTES

Reflect upon your present blessings, of which every man has many — not on your past misfortunes, of which all men have some.
CHARLES DICKENS

There is no surer mark of the absence of the highest moral and intellectual qualities than a cold reception of excellence.
PHILIP JAMES BAILEY

The final proof of greatness lies in being able to endure criticism without resentment.
ELBERT HUBBARD

Never speak evil of anyone if you do not know it for a certainty. If you know it for a certainty, ask yourself, "Why should I tell it?"
JOHANN KASPAR LAVATER

Show me the man you honor, and I will know what kind of man you are, for it shows me what your ideal of manhood is and what kind of man you long to be.
THOMAS CARLYLE

This above all: to thine own self be true, and it must follow, as the night the day, thou canst not then be false to any man.
SHAKESPEARE

The preservation of health is a duty. Few men seem conscious that there is such a thing as physical morality.
HERBERT SPENCER

CLASSIFIEDS

PHYSICIAN WANTED

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Staff positions and directorships available in Georgia and Alabama. Guaranteed salary including malpractice insurance/potential $70,000-$100,000. Emergency medicine or primary care training. Call or send CV to Coastal Emergency Services, Inc., 1900 Century Place, Ste. 340, Atlanta, GA 30345; (404) 325-1645; (800) 241-7471 outside Georgia.

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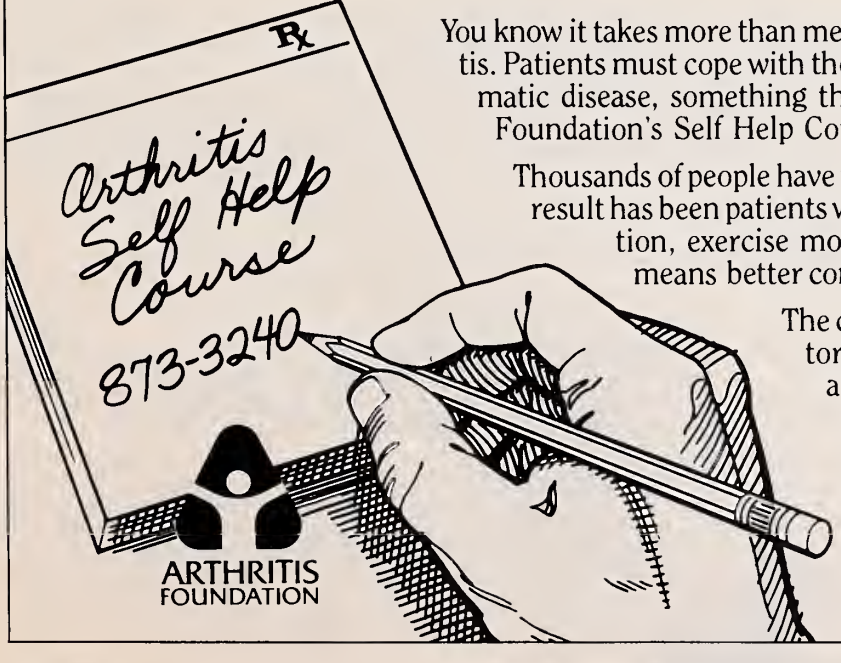
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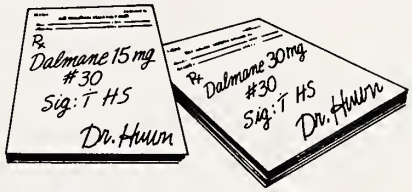
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